MMK TOLL ROAD PVT. LTD.
(A subsidiary of
IRB INFRASTRUCTURE DEVELOPERS LTD)

Corporate Office:
3rd Floor,IRB Complex, Chandivali Farm, Chandivali Village,
Andheri (E), Mumbai-400 072
Tel: 91-22-6640 4220 / 4880 4200 • Fax: 91-22-2857 3441
e-mail: info@irb.co.in • www.irb.co.in
CIN : U45200MH2002PTC135512

Date: March 15, 2024

To,
National Stock Exchange of India Limited
Exchange Plaza
Plot no. C/1, G Block
Bandra-Kurla Complex, Bandra (East)
Mumbai 400051

Dear Sir/Ma'am,

NSE Symbol: IRBIT / Series: IV

Sub.: Rights Issue of Units of the IRB Infrastructure Trust (the "Issue")

Further to our intimations dated March 5, 2024, March 08, 2024 and March 11, 2024, a letter of offer dated March 14, 2024, (the "LOF") in connection with the issue of up to 9,20,00,000 units (the "Units") representing an undivided beneficial interest in IRB Infrastructure Trust (the "Trust") at a price of Rs. 244.8586956* per Unit (the "Issue Price") aggregating up to Rs. 22,527 million on a rights basis to Eligible Unitholders in the ratio of 1 Unit for every 11.1053615760870* Units held by them on the Record Date (the "Issue"), has been filed with the Securities and Exchange Board of India (the "SEBI") and the National Stock Exchange of India Limited (the "NSE") on March 15, 2024. The Record Date is March 12, 2024. The Issue is a fast-track rights issue under applicable SEBI regulations. Details of the Issue schedule are set out in the LOF.

**For presentation purpose only, the Issue Price will be presented as rounded-off to two decimal places, i.e., Rs. 244.86 per Unit & the Rights Entitlement Ratio will be presented as rounded-off to two decimal places, i.e., 1 unit for every 11.11 Units held.*

Further pursuant to the Chapter 9 of the Master Circular, the LOF is available on the website of the Trust at www.irbinfratrust.co.in and Vivro Financial Services Private Limited (the Lead Manager to the Issue) at www.vivro.net and will be available on the websites of the relevant authorities.

Kindly take the same on record.

Thanking you,

Yours faithfully,
For MMK Toll Road Private Limited
(in its capacity as Investment Manager to IRB Infrastructure Trust)

KAUSTUBH PURUSHOTTAM SHEVADE
Digitally signed by KAUSTUBH PURUSHOTTAM SHEVADE
Date: 2024.03.15 03:01:04 +05'30'

Kaustubh Shevade
Company Secretary and Compliance Officer

Encl.: As above

Letter of Offer
Dated March 14, 2024
For Eligible Unitholders Only

IRB INFRASTRUCTURE TRUST

(An irrevocable trust set up under the Indian Trusts Act, 1882 and registered as an infrastructure investment trust with the Securities and Exchange Board of India)

Principal place of business: Off No-11th Floor/1101, Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India

SEBI Registration Number: IN/InvIT/19-20/0012; **Tel**: +91 22 6733 6400 | **Website:** www.irbinfratrust.co.in |

Compliance Officer: Mr. Kaustubh Shevade; **E-mail**: kaustubh.shevade@irb.co.in

Sponsor	Investment Manager	Trustee
IRB Infrastructure Developers Limited	**MMK Toll Road Private Limited**	**IDBI Trusteeship Services Limited**

FOR PRIVATE CIRCULATION TO THE ELIGIBLE UNITHOLDERS OF THE IRB INFRASTRUCTURE TRUST ONLY

Issue of up to 92,000,000 units (the "**Units**") representing an undivided beneficial interest in IRB Infrastructure Trust (the "**Trust**") at a price of ₹244.86* per Unit (the "**Issue Price**") aggregating up to ₹22,527.00 million on a rights basis to Eligible Unitholders in the ratio of one Unit for every 11.11** Units held by them on the Record Date (the "**Issue**"). The Record Date is March 12, 2024.

**The Issue Price is ₹244.8586956. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*
***The Rights Entitlement Ratio is one Unit for every 11.1053615760870 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*

THE ISSUE IS BEING MADE ONLY TO ELIGIBLE UNITHOLDERS IN RELIANCE UPON CHAPTER 9 OF THE MASTER CIRCULAR FOR INFRASTRUCTURE INVESTMENT TRUSTS (INVITS) DATED JULY 6, 2023 ISSUED BY THE SECURITIES AND EXCHANGE BOARD OF INDIA ("SEBI MASTER CIRCULAR") AND THE SECURITIES AND EXCHANGE BOARD OF INDIA (INFRASTRUCTURE INVESTMENT TRUSTS) REGULATIONS, 2014, EACH AS AMENDED.

This Letter of Offer relates to the Issue to existing Eligible Unitholders as on the Record Date under the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 and the SEBI Master Circular.

Each of the Investment Manager and the Lead Manager, having made all reasonable inquiries, accepts responsibility for and confirms that this Letter of Offer contains all information with regard to the Trust, the Units and the Issue, which is material in the context of the Issue, that the information contained in this Letter of Offer is true and correct in all material aspects and is not misleading in any material respect, that the opinions and intentions expressed herein are honestly held and that there are no other facts, the omission of which makes this Letter of Offer as a whole or any of such information or the expression of any such opinions or intentions misleading in any material respect.

The existing Units of the Trust are listed on National Stock Exchange of India Limited ("**NSE**" or the "**Stock Exchange**" or the "**Designated Stock Exchange**"). The Trust has received in-principle approval from the NSE for the listing of the Units to be allotted pursuant to the Issue through its letter dated March 13, 2024. The Investment Manager (on behalf of the Trust) will also make an application to the Stock Exchange to obtain trading approval for the Rights Entitlements. A copy of this Letter of Offer has been submitted to the SEBI and the Stock Exchange.

This Letter of Offer has not been, and will not be, registered as a prospectus, will not be circulated or distributed to the public at large in India or any other jurisdiction, and will not constitute a public offer in India or any other jurisdiction.

THIS LETTER OF OFFER IS PERSONAL TO EACH ELIGIBLE UNITHOLDER. THIS LETTER OF OFFER HAS BEEN PREPARED BY THE INVESTMENT MANAGER SOLELY FOR PROVIDING INFORMATION IN CONNECTION WITH THE ISSUE.

YOU MAY NOT, AND ARE NOT AUTHORIZED TO, (1) DELIVER THIS LETTER OF OFFER TO ANY OTHER PERSON; OR (2) REPRODUCE THIS LETTER OF OFFER IN ANY MANNER WHATSOEVER. ANY DISTRIBUTION OR REPRODUCTION OF THIS LETTER OF OFFER, IN WHOLE OR IN PART, IS UNAUTHORIZED. FAILURE TO COMPLY WITH THIS INSTRUCTION MAY RESULT IN A VIOLATION OF THE SECURITIES AND EXCHANGE BOARD OF INDIA (INFRASTRUCTURE INVESTMENT TRUSTS) REGULATIONS, 2014 OR OTHER APPLICABLE LAWS OF INDIA AND OF OTHER JURISDICTIONS.

INVESTMENTS IN UNITS INVOLVE RISKS AND INVESTORS SHOULD NOT INVEST ANY FUNDS IN THE ISSUE UNLESS THEY CAN AFFORD TO TAKE THE RISK OF LOSING THEIR ENTIRE INVESTMENT. FOR MAKING AN INVESTMENT DECISION, INVESTORS MUST RELY ON THEIR OWN EXAMINATION OF THE TRUST, THE UNITS, THE ISSUE, AND THIS LETTER OF OFFER. INVESTORS ARE ADVISED TO CAREFULLY READ THIS LETTER OF OFFER, INCLUDING THE SECTIONS "RISK FACTORS" AND "RIGHTS OF UNITHOLDERS" ON PAGES 17 AND 306, RESPECTIVELY. THE UNITS HAVE NOT BEEN RECOMMENDED OR APPROVED BY THE SECURITIES AND EXCHANGE BOARD OF INDIA (THE "SEBI") OR THE NATIONAL STOCK EXCHANGE OF INDIA ("NSE" OR THE "STOCK EXCHANGE") NOR DOES THE SEBI OR THE NSE GUARANTEE THE ACCURACY OR ADEQUACY OF THE CONTENTS OF THIS LETTER OF OFFER. EACH ELIGIBLE UNITHOLDER IS ADVISED TO CONSULT ITS OWN ADVISORS ABOUT THE CONSEQUENCES OF AN INVESTMENT IN THE UNITS BEING OFFERED PURSUANT TO THIS LETTER OF OFFER.

THE RIGHTS ENTITLEMENTS AND THE UNITS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT, OR ANY U.S. STATE SECURITIES LAWS AND MAY NOT BE OFFERED, SOLD, RESOLD OR OTHERWISE TRANSFERRED WITHIN THE UNITED STATES, EXCEPT IN A TRANSACTION EXEMPT FROM THE REGISTRATION REQUIREMENTS OF THE U.S. SECURITIES ACT. THE UNITS AND RIGHTS ENTITLEMENTS REFERRED TO IN THIS LETTER OF OFFER ARE BEING OFFERED AND SOLD IN OFFSHORE TRANSACTIONS OUTSIDE THE UNITED STATES IN COMPLIANCE WITH REGULATION S TO UNITHOLDERS LOCATED IN JURISDICTIONS WHERE SUCH OFFER AND SALE OF THE UNITS ARE PERMITTED UNDER LAWS OF SUCH JURISDICTIONS. THE OFFERING TO WHICH THIS LETTER OF OFFER RELATES IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSTRUED AS, AN OFFERING OF ANY UNITS OR RIGHTS ENTITLEMENTS FOR SALE IN THE UNITED STATES OR AS A SOLICITATION THEREIN OF AN OFFER TO BUY ANY OF THE SAID SECURITIES.

The distribution of this Letter of Offer or the disclosure of its contents without the Investment Manager's prior consent to any person other than the Eligible Unitholders is unauthorized and prohibited. Each Eligible Unitholder, by accepting delivery of this Letter of Offer, agrees to observe the foregoing restrictions and to make no copies of this Letter of Offer or any documents referred to in this Letter of Offer.

ISSUE SCHEDULE*

ISSUE OPENS ON	**TUESDAY, MARCH 19, 2024**
LAST DATE FOR REQUEST FOR RENUNCIATION	**TUESDAY, MARCH 19, 2024**
ISSUE CLOSES ON	**THURSDAY, MARCH 21, 2024#@**

** Eligible Unitholders are requested to ensure that any renunciation is completed in such a manner that Rights Entitlements are credited to the demat accounts of the Renouncees on or prior to the Issue Closing Date.*
 # The Investment Manager will have the right to modify the Issue Period as it may determine from time to time, provided that the Issue will remain open for at least three Working Days and will not remain open for a period longer than 15 Working Days.
@On the Issue Closing Date, Application Forms and Application Amount shall be accepted until 3.00 p.m. IST.

LEAD MANAGER	REGISTRAR TO THE ISSUE
Vivro Financial Services Private Limited 607/608 Marathon Icon, Opp. Peninsula Corporate Park, Off. Ganpatrao Kadam Marg Veer Santaji Lane, Lower Parel Mumbai 400 013, Maharashtra, India **Tel**: +91 22 6666 8040 **Email**: investors@vivro.net **SEBI registration number**: INM000010122 **Contact person**: Viral Shah **Website**: www.vivro.net **Investor Grievance Email**: investors@vivro.net **CIN**: U67120GJ1996PTC029182	**KFin Technologies Limited** Selenium Tower-B, Plot No. 31 &32 Gachibowli, Financial District, Nanakramguda Serilingampally, Hyderabad 500 032, Telangana, India **Tel**: +91 40 6716 2222/1800 309 4001 **Email**: irb.rights@kfintech.com **SEBI registration number**: INR000000221 **Contact person**: M. Murali Krishna **Website**: www.kfintech.com **Investor Grievance Email**: einward.ris@kfintech.com **CIN**: L72400TG2017PLC117649

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NOTICE TO INVESTORS

The statements contained in this Letter of Offer relating to the Trust and the Units are material, true, correct and adequate to enable investors to make an informed decision. The opinions and intentions expressed in this Letter of Offer with regard to the Trust and the Units are honestly held, have been reached after considering all relevant circumstances and are based on reasonable assumptions and information presently available with the Investment Manager or the Sponsor/Project Manager. There are no other facts in relation to the Trust and the Units, the omission of which would, in the context of the Issue, make any statement in this Letter of Offer misleading in any material respect. Further, each of the Investment Manager and the Sponsor/Project Manager has made all reasonable enquiries to ascertain such facts and to verify the accuracy of all such information and statements.

This Letter of Offer is solely for the use of the person who has received it from the Investment Manager or the Lead Manager. This Letter of Offer is not to be reproduced or distributed to any other person. Further, this Letter of Offer and the Application Form will be sent only to the e-mail addresses of Eligible Unitholders who have provided their e-mail addresses to the Investment Manager.

Each Applicant must rely on its own examination of the Trust and the merits and risks involved in investing in the Units. Applicants should not construe the contents of this Letter of Offer as legal, tax, accounting or investment advice.

The delivery of this Letter of Offer, at any time, does not imply that the information contained in it is correct as of any time subsequent to its date. This Letter of Offer is personal to each Eligible Unitholder. This Letter of Offer shall not be relied upon by, and the Lead Manager, the Investment Manager, the Trustee and/or the Sponsor/Project Manager shall not be liable to any subsequent acquirer, transferee or investor of the Units.

The distribution of this Letter of Offer or the disclosure of its contents to any person, other than the Eligible Unitholders to whom they are addressed and those retained by such Eligible Unitholders to enable them to make a decision with respect to their subscription to the Units, is unauthorized and prohibited. Each Applicant agrees to observe the foregoing restrictions and make no copies of this Letter of Offer or any other material in connection with the Issue or the Units.

Each Applicant will be deemed to have made the representations, agreements and acknowledgments as described in this section "*Notice to Investors*". Nothing contained herein will relieve any party of its rights or obligations under the Framework Agreement.

Notice to Investors in certain other jurisdictions

The distribution of this Letter of Offer, the Application Form and the issue of the Units in certain jurisdictions may be restricted by law. As such, this Letter of Offer does not constitute, and may not be used for, or in connection with, an offer or solicitation by anyone in any jurisdiction in which such offer or solicitation is not authorized or to any person to whom it is unlawful to make such offer or solicitation. In particular, no action has been taken by the Investment Manager or the Lead Manager which would permit an issue of the Units in any jurisdiction other than India. Accordingly, the Units may not be offered or sold, directly or indirectly, and neither this Letter of Offer nor any Issue materials in connection with the Units be distributed or published in or from any country or jurisdiction that would require registration of the Units in such country or jurisdiction.

THE RIGHTS ENTITLEMENTS AND THE UNITS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT, OR ANY U.S. STATE SECURITIES LAWS AND MAY NOT BE OFFERED, SOLD, RESOLD OR OTHERWISE TRANSFERRED WITHIN THE UNITED STATES, EXCEPT IN A TRANSACTION EXEMPT FROM THE REGISTRATION REQUIREMENTS OF THE U.S. SECURITIES ACT. THE UNITS AND RIGHTS ENTITLEMENTS REFERRED TO IN THIS LETTER OF OFFER ARE BEING OFFERED AND SOLD IN OFFSHORE TRANSACTIONS OUTSIDE THE UNITED STATES IN COMPLIANCE WITH REGULATION S TO UNITHOLDERS LOCATED IN JURISDICTIONS WHERE SUCH OFFER AND SALE OF THE UNITS ARE PERMITTED UNDER LAWS OF SUCH JURISDICTIONS. THE OFFERING TO WHICH THIS LETTER OF OFFER RELATES IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSTRUED AS, AN OFFERING OF ANY UNITS OR RIGHTS ENTITLEMENTS FOR SALE IN THE UNITED STATES OR AS A SOLICITATION THEREIN OF AN OFFER TO BUY ANY OF THE SAID SECURITIES.

Representations by Applicants

References herein to “you” or “your” is to each Applicant.

By subscribing to the Units pursuant to the Issue, you are deemed to have represented to the Trustee, the Investment Manager, the Lead Manager and the Sponsor/ Project Manager, and you acknowledge and agree as follows:

1. You are permitted to acquire the Units under the laws of any applicable jurisdiction and that you have necessary capacity and authority, and have obtained all necessary consents and authorizations to enable you to commit to this participation in the Issue and to perform your obligations in relation thereto (including, without limitation, on behalf of any person) and honor such obligations;

2. You will make all necessary filings, in relation to the Issue and your investment in Units, with appropriate governmental, statutory or regulatory authorities, including the RBI, as may be required, in accordance with applicable law;

3. You are aware that the Units have not been, and will not be registered through a prospectus under the InvIT Regulations, or under any other law in force in India. This Letter of Offer will be submitted to the SEBI and the Stock Exchange;

4. None of the Trust, the Sponsor/ Project Manager, the Investment Manager, the Trustee, the Lead Manager, the Project SPVs or any of their respective shareholders, directors, officers, employees, counsel, representatives, advisers, agents or affiliates is making any recommendations to you or advising you regarding the suitability of any transactions it may enter into in connection with the Issue. None of the Trust, the Sponsor/ Project Manager, the Trustee, the Investment Manager, the Lead Manager, the Project SPVs or any of their respective shareholders, employees, counsel, officers, directors, representatives, advisers, agents or affiliates have any duties or responsibilities to you for providing the protection afforded to their clients, or for providing advice in relation to the Issue and are in no way acting in a fiduciary capacity towards you;

5. All statements, other than statements of historical fact included in this Letter of Offer, including, without limitation, those regarding the Trust’s financial position, business strategy, plans and objectives for future operations and the Investment Objectives, are forward-looking statements. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors that could cause actual results to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. Such forward-looking statements are based on numerous assumptions regarding the Trust’s present and future business strategies and the environment in which the Trust will operate in the future. You should not place undue reliance on forward-looking statements, which speak only as of the date of this Letter of Offer. The Trust, the Trustee, the Sponsor, the Lead Manager and the Investment Manager assume no responsibility to update any of the forward-looking statements contained in this Letter of Offer;

6. You have been provided a copy of this Letter of Offer and have read it in its entirety including, in particular, the section “*Risk Factors*” on page 17;

7. You are aware and understand that the Units are being offered only to Eligible Unitholders on the Record Date on a rights basis and are not being offered to the general public;

8. In making your investment decision, you have (i) relied on your own examination of the Trust, the Units and the terms of the Issue, including the merits and risks involved, (ii) consulted your own independent advisors or otherwise have satisfied yourself concerning, without limitation, the effects of local laws and (iii) received all information in this Letter of Offer that you believe is necessary or appropriate in order to make an investment decision in respect of Trust and the Units;

9. You acknowledge that an investment in the Units involves a high degree of risk and that the Units are, therefore, a speculative investment. You are seeking to subscribe to the Units in the Issue for your own investment and not with a view to resell or distribute in any manner that could characterize you as an underwriter or similar party in any jurisdiction;

10. You will obtain your own independent legal, financial or tax advice and will not rely on the Investment Manager, the Sponsor/ Project Manager, the Trustee, the Lead Manager or any of their respective shareholders, employees, counsel, officers, directors, representatives, advisers, agents or affiliates when evaluating the tax consequences in relation to the Units (including but not limited to the Issue and the use of the proceeds of the Issue);

11. You are not the Trustee, the Valuer of the Trust or an employee of the Valuer of the Trust or the valuer involved in the valuation of the Project SPVs;

12. You understand that the Units to be Allotted in the Issue will, when issued, be credited as fully paid and will rank *pari passu* in all respect with all other Units, including in respect of the right to receive all distributions declared, made or paid in respect of the Units after the Allotment. For details, see "*Distributions*" on page 303;

13. The Trustee, the Investment Manager, the Sponsor/ Project Manager, the Lead Manager, their respective shareholders, employees, counsel, offices, directors, representatives, advisers, agents or affiliates, will rely on the truth and accuracy of the foregoing representations, warranties, acknowledgements and undertakings which are given to the Trust, the Sponsor/ Project Manager, the Lead Manager, the Investment Manager and the Trustee;

14. You are eligible to invest in India, in the Issue and in the Units under applicable law, including the InvIT Regulations, the SEBI Master Circular and the FEMA Rules, and have not been prohibited by the SEBI or any regulatory authority from buying, selling or dealing in units or securities;

15. You understand that none of the Investment Manager, the Sponsor/ Project Manager, the Lead Manager or the Trustee has any obligation to purchase or subscribe to all, or any part, of the Units subscribed by you in the Issue;

16. Any dispute arising in connection with the Issue will be governed by, and construed in accordance with, the laws of the Republic of India and shall be subject to the jurisdiction of the court in Mumbai, Maharashtra; and

17. You have made the representations, warranties, acknowledgements and agreements provided in this section and each of the representations, warranties, acknowledgements and agreements set out above shall continue to be true and accurate at all times, until and including the Allotment of Units in the Issue.

SECTION I – GENERAL

DEFINITIONS AND ABBREVIATIONS

This Letter of Offer uses certain definitions and abbreviations which, unless otherwise specified or the context otherwise indicates, requires or implies, shall have the meanings as provided below. References to any legislation, act, regulation, rule, guideline, policy, circular, notification or clarification shall be deemed to include all amendments, supplements, re-enactments and modifications thereto from time to time, and any reference to a statutory provision shall include any subordinate legislation made from time to time thereunder.

General Terms

Term	Description
Trust	IRB Infrastructure Trust, an irrevocable trust set up under the Trusts Act and registered as an infrastructure investment trust under the InvIT Regulations
We / us / our	Unless the context otherwise requires or implies, the Trust and the Project SPVs

Trust Related Terms

Term	Description
Associate	"Associate" shall have the meaning given to such term under Regulation 2(1)(b) of the InvIT Regulations
Capital Contribution	The total subscription amounts by way of cash or share swap or otherwise (including transfer of interest in the Trust Assets by the Sponsor) received by the Trust from Unitholders (including the Sponsor) in connection with any placement, offering or issue of Units
Consolidated Financial Statements	(i) Reviewed consolidated financial statements of the Trust and the Project SPVs, prepared in accordance with the requirements of the InvIT Regulations and Ind AS, as of and for the nine-month period ended December 31, 2023 together with the independent auditors' review report on unaudited condensed interim consolidated financial statements for the nine-month period ended December 31, 2023 of IRB Infrastructure Trust; and (ii) Audited consolidated financial statements for the Trust and the Project SPVs, prepared in accordance with the requirements of the InvIT Regulations and Ind AS, and the related notes, schedules and annexures thereto, and the auditors' reports as of and for the Financial Years 2023, 2022 and 2021. IRB LTPL was incorporated on November 10, 2023 and the Consolidated Financial Statements includes information for IRB LTPL since its incorporation. IRB KTPL and IRB GTPL were incorporated on January 1, 2024, i.e., after December 31, 2023. Accordingly, the Consolidated Financial Statements does not include the financial statements for such Project SPVs.
Cintra	Together, Cintra InvIT Investments B.V. and Cintra IM Investments B.V.
Cintra Transaction	The proposed purchase of (i) 24% of the Units of the Trust by Cintra InvIT Investments B.V. from certain Financial Investors; and (ii) 24% of the equity shares of the Investment Manager, by Cintra IM Investments B.V. from Croxley. Closing of the Cintra Transaction is subject to the receipt of requisite regulatory approvals.
Cintra IM Investor	Cintra IM Investments B.V.
Cintra InvIT Investor	Cintra InvIT Investments B.V.
Croxley	Croxley Investment Pte. Ltd.
Debt Novation Agreements	The debt novation agreements dated February 19, 2020 entered into by the Trust (acting through the Trustee), the Investment Manager and the Sponsor, with each of the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL) and the Sponsor's affiliates (as applicable), in relation to the novation of subordinated debt and unsecured loans provided by the Sponsor and its associates to the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL, IRB GTPL), as amended
Designated Stock Exchange or NSE or Stock Exchange	The National Stock Exchange of India Limited
Financial Investors	Bricklayers Investment Pte. Ltd., Chiswick Investment Pte. Ltd., Dagenham Investment Pte. Ltd., Anahera Investment Pte. Ltd. and Stretford End Investment Pte. Ltd.

Term	Description
Formation Transactions	The transactions pursuant to which the Trust acquired the shareholding of the Sponsor in the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL) and the subordinated debt and unsecured loans provided by the Sponsor and its associates to the Project SPV (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL) stood novated in favor of the Trust in consideration for Units issued to the Sponsor
Framework Agreement	The framework agreement dated August 6, 2019 among the Sponsor, the Investment Manager, the Financial Investors and Croxley, as amended* **With effect from the date of closing of the Cintra Transaction, the Framework Agreement shall mean the framework agreement dated August 6, 2019 among the Sponsor, the Investment Manager, the Financial Investors, Croxley and Cintra, as amended*
Indenture of Trust	The indenture of trust dated August 27, 2019 between the Sponsor and the Trustee to settle the Trust, as amended
Investment Management Agreement	The investment management agreement dated August 27, 2019 between the Trustee (on behalf of the Trust) and the Investment Manager for managing and administration of the Trust, in accordance with the InvIT Regulations, as amended
Investment Manager	MMK Toll Road Private Limited
IRB GTPL Project Implementation Agreement	The project implementation agreement dated March 13, 2024 entered into by the Trustee (on behalf of the Trust), the Investment Manager and the Project Manager with IRB GTPL, which sets out the obligations of the Project Manager with respect to the execution, operation and maintenance of the project undertaken by IRB GTPL in accordance with the InvIT Regulations
IRB GTPL Shareholder Loan Agreement	The shareholder loan agreement dated March 13, 2024 entered into by the Trust (acting through the Trustee) and the Investment Manager with IRB GTPL to provide unsecured loans to IRB GTPL
IRB GTPL Share Subscription Agreement	The share subscription agreement dated March 13, 2024 entered into by the Trust (acting through the Trustee), the Investment Manager and IRB GTPL
IRB KTPL Project Implementation Agreement	The project implementation agreement dated March 13, 2024 entered into by the Trustee (on behalf of the Trust), the Investment Manager and the Project Manager with IRB KTPL, which sets out the obligations of the Project Manager with respect to the execution, operation and maintenance of the project undertaken by IRB KTPL in accordance with the InvIT Regulations
IRB KTPL Shareholder Loan Agreement	The shareholder loan agreement dated March 13, 2024 entered into by the Trust (acting through the Trustee) and the Investment Manager with IRB KTPL to provide unsecured loans to IRB KTPL
IRB KTPL Share Subscription Agreement	The share subscription agreement dated March 13, 2024 entered into by the Trust (acting through the Trustee), the Investment Manager and IRB KTPL
IRB LTPL Project Implementation Agreement	The project implementation agreement dated March 13, 2024 entered into by the Trustee (on behalf of the Trust), the Investment Manager and the Project Manager with IRB LTPL, which sets out the obligations of the Project Manager with respect to the execution, operation and maintenance of the project undertaken by IRB LTPL in accordance with the InvIT Regulations
IRB LTPL Shareholder Loan Agreement	The shareholder loan agreement dated March 13, 2024 entered into by the Trust (acting through the Trustee) and the Investment Manager with IRB LTPL to provide unsecured loans to IRB LTPL
IRB LTPL Share Subscription Agreement	The share subscription agreement dated March 13, 2024 entered into by the Trust (acting through the Trustee), the Investment Manager and IRB LTPL
Joint Statutory Auditors / Trust's Joint Statutory Auditors	Gokhale & Sathe, Chartered Accountants and M S K A & Associates, Chartered Accountants, joint statutory auditors of the Trust
Manager Group or Manager Group Members	The Investment Manager, the Project SPVs, the Trust and the entities controlled by the Investment Manager/ the Trust, including any other SPVs
Parties to the Trust	The Sponsor, the Investment Manager, the Trustee and the Project Manager
Policies	The policies in relation to the Manager Group as specified in "*Corporate Governance*" on page 159.
Portfolio	The toll road assets owned, operated and maintained by the Project SPVs
Portfolio Valuation Report	Valuation report dated March 8, 2024 issued by the Valuer in relation to the valuation of the Portfolio as of December 31, 2023. The Portfolio Valuation Report does not include information for IRB LTPL, IRB GTPL and IRB KTPL.
Project Entities	The entities through which the Sponsor operates its various road infrastructure projects
Project Implementation Agreements	The project implementation agreements dated February 3, 2020, as amended, entered into by the Trustee (on behalf of the Trust), the Investment Manager and the Project Manager, with each of the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL

Term	Description
	and IRB GTPL), the project implementation agreement dated May 19, 2022 entered into by the Trustee (on behalf of the Trust), the Investment Manager and the Project Manager with PDTPL, the project implementation agreement dated August 2, 2023 entered into by the Trustee (on behalf of the Trust), the Investment Manager and the Project Manager with IRB GEPL, the project implementation agreement dated October 12, 2023 entered into by the Trustee (on behalf of the Trust), the Investment Manager and the Project Manager with STPL, the IRB LTPL Project Implementation Agreement, the IRB KTPL Project Implementation Agreement and the IRB GTPL Project Implementation Agreement, each as amended, which set out the obligations of the Project Manager with respect to the execution, operation and maintenance of the project undertaken by such Project SPV in accordance with the InvIT Regulations,
Project Manager	IRB Infrastructure Developers Limited
Project SPVs	The entities that form part of the Portfolio of the Trust, namely the following: i) AE Tollway Limited; ii) CG Tollway Limited; iii) IRB Hapur Moradabad Tollway Limited; iv) IRB Westcoast Tollway Limited; v) Kaithal Tollway Limited; vi) Kishangarh Gulabpura Tollway Limited; vii) Solapur Yedeshi Tollway Limited; viii) Udaipur Tollway Limited; ix) Yedeshi Aurangabad Tollway Limited; x) Palsit Dankuni Tollway Private Limited; xi) IRB Golconda Expressway Private Limited; xii) Samakhiyali Tollway Private Limited; xiii) IRB Lalitpur Tollway Private Limited; xiv) IRB Kota Tollway Private Limited; and xv) IRB Gwalior Tollway Private Limited.
Shareholder Loan Agreements or Project SPV Shareholder Loan Agreements	Collectively, the shareholder loan agreements dated February 19, 2020 entered into by the Trust (acting through the Trustee) and the Investment Manager with each of the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL), the shareholder loan agreement dated April 7, 2022 entered into by the Trust (acting through the Trustee) and the Investment Manager with PDTPL, the shareholder loan agreement dated July 29, 2023 entered into by the Trust (acting through the Trustee) and the Investment Manager with IRB GEPL, the shareholder loan agreement dated October 12, 2023 entered into by the Trust (acting through the Trustee), the Investment Manager with STPL, the IRB LTPL Shareholder Loan Agreement, the IRB GTPL Shareholder Loan Agreement and the IRB KTPL Shareholder Loan Agreement, to provide unsecured loans to each of the Project SPVs
Sponsor Group	Collectively, the Sponsor, IRB Holding Private Limited, Mr. Virendra D. Mhaiskar, Ms. Deepali V. Mhaiskar and Virendra D. Mhaiskar (HUF)
Sponsor	IRB Infrastructure Developers Limited
SPVs or Identified SPVs	The SPVs held by the Trust in accordance with the InvIT Regulations
Standalone Financial Statements	(i) Reviewed standalone financial statements of the Trust, prepared in accordance with the requirements of the InvIT Regulations and Ind AS, as of and for the nine-month period ended December 31, 2023, together with the independent auditors' review report on unaudited condensed interim standalone financial statements for the nine-month period ended December 31, 2023 of IRB Infrastructure Trust; and (ii) Audited standalone financial statements for the Trust, prepared in accordance with the requirements of the InvIT Regulations and Ind AS, and the related notes, schedules and annexures thereto, and the auditors' reports as of and for the Financial Years 2023, 2022 and 2021
Stock Exchanges	BSE Limited and National Stock Exchange of India Limited
TOT-12 and TOT-13 Valuation Reports	Valuation report dated March 8, 2024 issued by the Valuer in relation to the valuation of IRB LTPL, IRB GTPL and IRB KTPL as of January 31, 2024
Traffic Consultant	GMD Consultants
Traffic Reports	The reports dated March 4, 2024 prepared by the Traffic Consultant for the underlying road projects operated by the Project SPVs
Trust Assets	The assets owned by the Trust, whether directly or through an SPV or a Holding Company, and shall include all rights, interests and benefits arising from and incidental to ownership of such assets
Trust Documents	The Indenture of Trust, the charter documents of the Investment Manager, the Investment Management Agreement, the Trust Contribution Agreement (if any), the Project

Term	Description
	Implementation Agreements, any agreements among the Trustee, the Investment Manager and the Unitholders, in relation to the Trust, the Units, any debt securities or instruments or obligations issued by the Trust, any offering document in connection with a capital or debt issuance by the Trust (including the Issue), including any preliminary placement memorandum, final placement memorandum, information memorandum, draft offer document, offer document and final offer document, Policies, the Investment Manager and/or the SPVs/Holdcos, business plans and annual budget adopted by the Investment Manager and such other documents in connection herewith, as executed, issued, adopted and amended, modified, supplemented or restated from time to time
Trust Group or Trust Group Members	The Sponsor and the Manager Group Members
Trustee	IDBI Trusteeship Services Limited
Unitholder	An investor which holds Units of the Trust from time to time
Units	Undivided beneficial interest in the Trust and the Units together represent the entire beneficial interest in the Trust
Valuer	KPMG Valuation Services LLP
Working Day	Any day which is not (a) a Saturday or Sunday; or (b) a day on which commercial banks in Mumbai, Delhi or Singapore are closed for ordinary banking business

Project SPVs

Term	Description
AETL	AE Tollway Limited
CGTL	CG Tollway Limited
IRB GEPL	IRB Golconda Expressway Private Limited
IRB GTPL	IRB Gwalior Tollway Private Limited
IRB HMTL	IRB Hapur Moradabad Tollway Limited
IRB KTPL	IRB Kota Tollway Private Limited
IRB LTPL	IRB Lalitpur Tollway Private Limited
IRB WTL	IRB Westcoast Tollway Limited
KGTL	Kishangarh Gulabpura Tollway Limited
KTL	Kaithal Tollway Limited
PDTPL	Palsit Dankuni Tollway Private Limited
STPL	Samakhiyali Tollway Private Limited
SYTL	Solapur Yedeshi Tollway Limited
UTL	Udaipur Tollway Limited
YATL	Yedeshi Aurangabad Tollway Limited

Issue Related Terms

Term	Description
Allotment Advice	The note or advice or intimation of Allotment sent to each successful Applicant who has been or is to be Allotted Units pursuant to the Issue after approval of the Basis of Allotment by the Designated Stock Exchange
Allot/ Allotment/ Allotted	Unless the context otherwise requires, the issue and allotment of Units pursuant to the Issue
Allottees	Persons to whom Units will be issued and Allotted pursuant to the Issue
Applicant	Eligible Unitholders and Renouncees who are entitled to apply or make an application for Units pursuant to the Issue in terms of this Letter of Offer
Application Amount	The amount payable by an Applicant simultaneously with the submission of the Application Form during the Issue Period, for the number of Units applied for at the Issue Price specified in this Letter of Offer
Application Form	The Application Form used to make an application for Allotment of Units in the Issue
Basis of Allotment	The basis on which the Units will be Allotted to successful Applicants in consultation with the Designated Stock Exchange in the Issue, as described in "*Issue Procedure*" on page 721
Cash Escrow Agreement	Agreement dated March 12, 2024 entered into among the Trustee (acting on behalf of, and in its capacity as trustee to, the Trust), the Investment Manager, the Lead

Term	Description
	Manager and the Escrow Collection Bank for, *inter-alia*, for collection and refund of the Application Amounts
Client ID	Client identification number maintained with one of the Depositories in relation to a demat account
Demographic Details	Details of the Applicants including the Applicant's address, name of the Applicant's father/husband, investor status, occupation and bank account details
Designated Account	The designated account specified in the Application Form, in whose favor Applicants are required to transfer money through direct credit/NEFT/NACH/RTGS in respect of the Application Amount when submitting an Application Form
Eligible Unitholders	Unitholders of the Trust as on the Record Date
Escrow Collection Bank	Canara Bank
Issue	Issue of up to 92,000,000 Units at a price of ₹244.86* per Unit aggregating up to ₹22,527.00 million on a rights basis to Eligible Unitholders in the ratio of one Unit for every 11.11** Units held by them on the Record Date **The Issue Price is ₹244.8586956. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.* ***The Rights Entitlement Ratio is one Unit for every 11.1053615760870 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*
Issue Closing Date	March 21, 2024, which is the last date until which the Application Forms shall be accepted. The Investment Manager will have the right to modify the Issue Period as it may determine from time to time, provided that the Issue will remain open for at least three Working Days and will not remain open for a period longer than 15 Working Days. On the Issue Closing Date, Application Forms and Application Amount shall be accepted until 3.00 p.m. IST.
Issue Opening Date	March 19, 2024, prior to which the Application Forms shall be dispatched to Eligible Unitholders by the Investment Manager and the date from which the Investment Manager shall accept Application Forms
Issue Period	Period between the Issue Opening Date and the Issue Closing Date, inclusive of both days, during which Applicants can submit their Application Forms
Issue Price	₹244.86* per Unit **The Issue Price is ₹244.8586956. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*
Issue Proceeds	The gross proceeds of this Issue, being ₹22,527.00 million* **Assuming full subscription* For further details in relation to the use of Issue Proceeds, see the section "*Objects of the Issue*" on page 69
Lead Manager	Vivro Financial Services Private Limited
Letter of Offer	This Letter of Offer dated March 14, 2024 filed with the SEBI and the Stock Exchange in connection with the Issue
Off Market Renunciation	The renouncement of Rights Entitlements undertaken by an Eligible Unitholder by transferring them through off market transfer through a depository participant in accordance with applicable law
On Market Renunciation	The renouncement of Rights Entitlements undertaken by an Eligible Unitholder by trading them over the secondary market platform of the Stock Exchange through a registered stock broker in accordance with applicable law
Record Date	March 12, 2024
Registrar and Unit Transfer Agent or Registrar	KFin Technologies Limited
Renouncee	Any person(s) who, not being the original recipient, has/have acquired the Rights Entitlement
Renunciation Period	The period during which Eligible Unitholders can renounce or transfer their Rights Entitlements, which will commence from the Issue Opening Date. Eligible Unitholders are requested to ensure that renunciation is completed in such a manner that Rights Entitlements are credited to the demat account of the Renouncees on or prior to the Issue Closing Date
Rights Entitlements	The right to apply for Units being offered pursuant to this Issue in accordance with the InvIT Regulations, in this case being one Unit for every 11.11* Units held by an

Term	Description
	Eligible Unitholder on the Record Date. The Rights Entitlement for each Eligible Unitholder will be specified in the Application Form **The Rights Entitlement Ratio is one Unit for every 11.1053615760870 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*
Rights Entitlements Letter	Letter including details of Rights Entitlements of the Eligible Unitholders
Working Day	Any day which is not (a) a Saturday or Sunday; or (b) a day on which commercial banks in Mumbai, Delhi or Singapore are closed for ordinary banking business. In respect of the Issue Period, "Working Day" shall mean all days, excluding Saturdays, Sundays and public holidays, on which commercial banks in Mumbai are open for business

Technical/Industry Related Terms/Abbreviations

Term	Description
BOT	Build-Operate-Transfer
CCEA	Cabinet Committee on Economic Affairs
DBFOT	Design-Build-Finance-Operate-Transfer
EPC	Engineering Procurement and Construction
ETC	Electronic Toll Collection
HGCL	Hyderabad Growth Corridor Limited
HMDA	Hyderabad Metropolitan Development Authority
MoRTH	Ministry of Road Transport and Highways
NH	National Highway
NHAI	National Highways Authority of India
NHDP	National Highways Development Project
O&M	Operation and Maintenance
PPP	Public Private Partnership
TOT	Toll-Operate-Transfer

Conventional Terms/Abbreviations

Term	Description
Alternative Investment Funds or AIFs	Alternative investment funds as defined in, and registered under, the SEBI AIF Regulations
CAGR	Compounded Annual Growth Rate
Category I FPIs	FPIs registered as "Category I foreign portfolio investors" under the SEBI FPI Regulations
Category II FPIs	FPIs registered as "Category II foreign portfolio investors" under the SEBI FPI Regulations
CDSL	Central Depository Services (India) Limited
CIN	Corporate Identity Number
Companies Act, 2013	Companies Act, 2013 read with the rules, regulations, clarifications and notifications thereunder
Contract Labour Act	Contract Labour (Regulation and Abolition) Act, 1970
COVID-19	Coronavirus disease 2019
DIN	Director Identification Number
DPIIT	Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India (formerly known as Department of Industrial Policy and Promotion)
DP ID	Depository participant identification
DP/ Depository Participant	A depository participant as defined under the Depositories Act
Debenture Trustees Regulations	Securities and Exchange Board of India (Debenture Trustees) Regulations, 1993
Depositories	NSDL and CDSL
Depositories Act	Depositories Act, 1996
FCNR Account	Foreign Currency Non-Resident Account, and has the meaning ascribed to the term "FCNR(B) account" under the Foreign Exchange Management (Deposit) Regulations, 2016

Term	Description
FDI	Foreign Direct Investment
FDI Policy	The 'Consolidated FDI Policy Circular of 2020' (No. 5(2)/2020-FDI Policy) issued by the DPIIT (FDI Division), which has been effective since October 15, 2020
FEMA	Foreign Exchange Management Act, 1999, read with rules and regulations thereunder
FEMA Rules	The Foreign Exchange Management (Non-debt Instruments) Rules, 2019
Financial Year / Fiscal / FY	Unless stated otherwise, the period of 12 months ending March 31 of that particular year
FPI(s)	Foreign portfolio investors, as defined in and registered under the SEBI FPI Regulations
GoI / Government	Government of India
HUF	Hindu Undivided Family
ICAI	The Institute of Chartered Accountants of India
IFRS	International Financial Reporting Standards
Income Tax Act/ I.T. Act	The Income-tax Act, 1961
Ind AS	Indian Accounting Standards
InvIT Regulations	Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 and the circulars, notifications, guidelines and clarifications issued thereunder, each as amended
IST	Indian Standard Time
km	Kilometres
LLP Act	The Limited Liability Partnership Act, 2008
Mutual Fund(s)	Mutual fund(s) as defined in and registered under the Securities and Exchange Board of India (Mutual Funds) Regulations, 1996
NACH	National Automated Clearing House
NAV	Net asset value
NEFT	National Electronic Fund Transfer
NRE Account	Non-Resident External Account, as defined under the Foreign Exchange Management (Deposit) Regulations, 2016
NRI	An individual resident outside India who is a citizen of India
NRO	Non-Resident Ordinary Account, as defined under the Foreign Exchange Management (Deposit) Regulations, 2016
NSDL	National Securities Depository Limited
p.a.	Per annum
PAN	Permanent Account Number
PAT	Profit after tax
Pension Fund	Pension fund, as defined in and registered under the Pension Fund Regulatory and Development Authority Act, 2013
PFRDA	Pension Fund Regulatory and Development Authority
RBI	Reserve Bank of India
Registration Act	Registration Act, 1908
RTGS	Real Time Gross Settlement
SCRA	Securities Contracts (Regulation) Act, 1956
SCRR	Securities Contracts (Regulation) Rules, 1957
SEBI	The Securities and Exchange Board of India constituted under the SEBI Act
SEBI Act	Securities and Exchange Board of India Act, 1992
SEBI AIF Regulations	Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012
SEBI Depository Regulations	Securities and Exchange Board of India (Depositories and Participants) Regulations, 2018
SEBI FPI Regulations	Securities and Exchange Board of India (Foreign Portfolio Investors) Regulations, 2019
SEBI FVCI Regulations	Securities and Exchange Board of India (Foreign Venture Capital Investors) Regulations, 2000
SEBI Intermediaries Regulations	Securities and Exchange Board of India (Intermediaries) Regulations, 2008
SEBI Master Circular	Master Circular for Infrastructure Investment Trusts (InvITs) dated July 6, 2023 issued by the SEBI
SEBI VCF Regulations	Securities and Exchange Board of India (Venture Capital Funds) Regulations, 1996
Trusts Act	Indian Trusts Act, 1882
VCFs	Venture capital funds as defined in and registered with the SEBI under the SEBI VCF Regulations

The words and expressions used but not defined herein shall have the meanings assigned to such terms under the SEBI Act, the SCRA, the InvIT Regulations and the rules, regulations, circulars and guidelines made thereunder.

Notwithstanding the foregoing, terms in "*Statement of Tax Benefits*", "*Regulations and Policies*", "*Summary of the Concession Agreements*", "*Financial Statements*", and "*Material Litigation and Regulatory Action*" on pages 83, 276, 165, 333 and 695, respectively, shall have the meanings given to such terms in these respective sections.

PRESENTATION OF FINANCIAL, INDUSTRY AND MARKET DATA

Certain Conventions

All references to "India" contained in this Letter of Offer are to the Republic of India and all references to the "U.S.", "USA" or the "United States" are to the United States of America.

Unless stated otherwise, all references to page numbers in this Letter of Offer are to the page numbers of this Letter of Offer.

Financial Data

Unless stated otherwise, the financial data included in this Letter of Offer in relation to the Trust and the Project SPVs is derived from the Consolidated Financial Statements which has been prepared in accordance with the requirements of the InvIT Regulations and Ind AS. This Letter of Offer also includes the Standalone Financial Statements in relation to the Trust. For further information, see "*Financial Statements*" on page 333.

IRB LTPL was incorporated on November 10, 2023 and the Consolidated Financial Statements includes information for IRB LTPL since its incorporation. IRB KTPL and IRB GTPL were incorporated on January 1, 2024, i.e., after December 31, 2023. Accordingly, the Consolidated Financial Statements does not include information for IRB KTPL and IRB GTPL. Given that IRB KTPL and IRB GTPL were incorporated on the above date and have not undertaken any operations, (i) *pro forma* financial statements of the Trust, IRB KTPL and IRB GTPL has not been prepared; (ii) audited financial statements of IRB KTPL and IRB GTPL for the period from January 1, 2024 until the date of this Letter of Offer is not meaningful and is not included in this Letter of Offer; and (iii) summary financial statements of IRB KTPL and IRB GTPL for the above period is not meaningful and is not included in this Letter of Offer.

This Letter of Offer also includes summary financial statements of (i) the Sponsor as of and for the Financial Years 2023, 2022 and 2021 from the audited consolidated financial statements of the Sponsor which have been prepared in accordance with the Companies Act and Ind AS; and (ii) the Investment Manager for the Financial Years 2023, 2022 and 2021 from the audited financial statements of the Investment Manager which have been prepared in accordance with the Companies Act and Ind AS. For further information, see "*Summary Financial Statements*" on page 43.

The financial year for the Trust, the Sponsor, the Investment Manager and the Project SPVs commences on April 1 and ends on March 31 of the next year. Accordingly, all references to a particular Financial Year or fiscal, unless stated otherwise, are to the 12-month period ended on March 31 of that year.

The degree to which the financial information included in this Letter of Offer will provide meaningful information is entirely dependent on the reader's level of familiarity with Indian accounting policies and practices, the Companies Act, Ind AS and the InvIT Regulations. The Investment Manager has not attempted to explain these differences or quantify their impact on the financial data included in this Letter of Offer, and it is urged that you consult your own advisors regarding such differences and their impact on our financial data. Any reliance by persons not familiar with the accounting policies and practices on the financial disclosures presented in this Letter of Offer should accordingly be limited.

In this Letter of Offer, all figures and percentage figures in decimals have been rounded off to two decimals. However, where any figures may have been sourced from third-party industry sources, such figures may be rounded-off to such number of decimal points as provided in such respective sources. In this Letter of Offer, (i) the sum or percentage change of certain numbers may not conform exactly to the total figure given; and (ii) the sum of the numbers in a column or row in certain tables may not conform exactly to the total figure given for that column or row. Any such discrepancies are due to rounding off.

Unless stated or the context requires otherwise, any percentage amounts, as disclosed in "*Risk Factors*", "*Business*" and "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" on pages 17, 124 and 666, respectively, and elsewhere in this Letter of Offer have been calculated on the basis of the Consolidated Financial Statements.

Currency and Units of Presentation

All references to:

i) "Rupees" or "Rs." or "INR" or "₹" are to Indian Rupees, the official currency of the Republic of India; and
ii) "US$" or "USD" are to United States Dollars, the official currency of the United States of America.

Certain numerical information in this Letter of Offer has been presented in "million" and "billion" units. One million represents 1,000,000 and one billion represents 1,000,000,000.

Exchange Rates

This Letter of Offer contains conversions of certain other currency amounts into Indian Rupees. These conversions should not be construed as a representation that these currency amounts could have been, or can be converted into Indian Rupees, at any particular rate or at all.

The following table sets forth, for the periods indicated, information with respect to the exchange rate between the Rupee and the U.S. Dollar (in Rupees per U.S. Dollar):

As at	Reference rate (₹ per US$)
December 31, 2023	83.12
March 31, 2023	82.22
March 31, 2022	75.81
March 31, 2021	73.50

Source: Financial Benchmarks India Private Limited reference rate.
Note: Where the exchange rate was not available on account of the particular day being a holiday, the exchange rate as of the immediately preceding Working Day has been provided.

Industry and Market Data

Unless stated otherwise, industry and market data used in this Letter of Offer has been obtained or derived from the Traffic Reports prepared by the Traffic Consultant with respect to the toll revenues for the underlying road projects operated by the Project SPVs, which are commissioned reports, and publicly available information as well as other Government and industry publications and sources. The Investment Manager has commissioned the Traffic Reports, included in this Letter of Offer as "*Annexure A: Traffic Reports*", to provide an independent estimation of the projected traffic volumes with respect to the underlying road projects operated by the Project SPVs, which is based on historical data and certain assumptions.

Industry as well as Government publications generally state that information contained in those publications has been obtained from sources believed to be reliable but that their accuracy and completeness are not guaranteed and their reliability cannot be assured. Such data involves risks, uncertainties and numerous assumptions and is subject to change based on various factors, including those discussed in the section "*Risk Factors*" on page 17. Accordingly, investment decisions should not be based solely on such information.

The extent to which market and industry data used in this Letter of Offer is meaningful depends on the reader's familiarity with and understanding of methodologies used in compiling such data. There are no standard data gathering methodologies in the industry in which business of the Project SPVs/Trust is conducted, and methodologies and assumptions may vary widely among different industry sources.

Valuation

The Valuation Reports have been prepared by the Valuer and were commissioned by the Investment Manager. The Valuation Reports are subject to the following disclaimers:

"*This document includes selected provisions of or a summary of the valuation reports dated March 08, 2024 ("Reports") related to valuation of of the Portfolio of the Trust (excluding IRB LTPL, IRB GTPL and IRB KTPL) and valuation of IRB LTPL, IRB GTPL and IRB KTPL, prepared by KPMG Valuation Services LLP ("KPMG"), solely in its capacity as the registered Valuer on behalf of IRB Infrastructure Trust (the "Client") only and is not a full statement of the terms of the Reports.*

Any reader of the Reports must view the summaries in the context of the full Reports, which are subject to the limitations and disclaimers in such Reports. Without limiting the generality of the foregoing, the Reports are *expressly subject to the qualifications, assumptions made, procedures followed, matters considered and any limitations on the scope of work contained therein. It will be for the reader to determine the extent to which the work undertaken and the Reports provided by KPMG may be suitable for the reader.*

These summaries, and the Reports, are provided only as of the date set forth therein and do not contemplate any event, circumstances or changes with respect to Issue or otherwise after such date. The foregoing summaries of the Reports may include projected information and data (financial and otherwise), and other forward-looking information, that may or may not occur or prove to be accurate. Such projected and forward-looking information is based on current expectations and projections about future events which are beyond the control of KPMG, the Client or any other participant in the Issue, and such projections and information can be affected by inaccurate assumptions. While these projections and information were prepared in good faith, no assurance can be given as to the accuracy or adequacy of such projections and information, or the assumptions underlying such projections and information. These summaries and Reports are confidential and are not to be copied, disclosed, circulated or referred to in whole or part to any other person and or entity other than to whom it has been permitted by KPMG without KPMG's prior written permission. KPMG does not assume any responsibility and disclaims any liability, however occasioned to Client or any other party, as a result of the circulation, publication or reproduction of the summaries and Reports.

This summary and the Reports is prepared in accordance with the terms agreed with the Client under the engagement letter dated 16th October 2023 along with its addendums, for the Client only. The total aggregate liability of KPMG and its officers, employees and affiliates for any loss, damage, cost or expense suffered or incurred by all persons or entities (including but not limited to the Client or any other party) and for all claims in respect of work performed in connection with the Issue and/or the Report, is hereby limited to the amount of fees actually paid by the Client to KPMG in connection with the Report (the "Aggregate Liability Cap"). KPMG is released from all liability in excess of the Aggregate Liability Cap.

This is not an expert opinion but is a view basis work done in accordance with the SEBI InvIT Regulations requiring an independent valuation. The decision whether to proceed with and consummate any transaction with the Client or its assets, solely rests with the respective investor and our findings should not in any way constitute a recommendation as to whether any party should or should not consummate the transaction."

Websites

The information contained on the websites of the Trustee, the Sponsor or the other websites referenced in this Letter of Offer or that can be accessed through such websites, neither constitutes part of this Letter of Offer, nor is it incorporated by reference therein and should not form the basis of any investment decision. For details of the websites of the Trust, the Trustee and the Sponsor, see "*General Information*" on page 65.

FORWARD-LOOKING STATEMENTS

This Letter of Offer contains certain "forward-looking statements". These forward-looking statements generally can be identified by words or phrases such as "aim", "anticipate", "believe", "expect", "estimate", "intend", "objective", "plan", "goal", "project", "propose", "seek to", "likely", "will", "will continue", "will pursue", or other words or phrases of similar import. Similarly, statements that describe strategies, objectives, plans or goals are also forward-looking statements. All forward-looking statements are subject to risks, uncertainties and assumptions about the Trust and the Project SPVs (including the Project SPVs proposed to be financed through the proceeds of this Issue, i.e., IRB LTPL, IRB GTPL and IRB KTPL) that could cause actual results to differ materially from those contemplated by the forward-looking statements.

The TOT-12 and TOT-13 Valuation Reports are based on certain projections and accordingly, should be read together with the assumptions and notes thereto. The Traffic Reports include projections/estimates in relation to traffic growth, and accordingly, should be read in conjunction with the notes and assumptions thereto. See "*Annexure A: Traffic Reports*" and "*Annexure B: TOT-12 and TOT-13 Valuation Reports*" on pages A-1 and B-1, respectively.

Actual results may differ materially from those suggested by forward-looking statements due to risks or uncertainties associated without expectations with respect to, but not limited to, regulatory changes pertaining to the infrastructure sector in India and our ability to respond to them, our ability to successfully implement our strategy, our growth and expansion plans, technological changes, our exposure to market risks, general economic and political conditions in India which have an impact on our business activities or investments, the monetary and fiscal policies of India, inflation, deflation, unanticipated turbulence in interest rates, foreign exchange rates, equity prices or other rates or prices, the performance of the financial markets in India and globally, changes in domestic laws, regulations and taxes and changes in competition in the infrastructure sector. Certain important factors that could cause actual results to differ materially from our expectations include, but are not limited to, the following:

- The debt financing provided by the Trust to each of the Project SPVs and to be provided by the Trust to IRB LTPL, IRB GTPL and IRB KTPL is comprised of interest-free loans, certain of which are unsecured. Such loans to be provided by the Trust will become interest-bearing at a future date in accordance with the IRB LTPL Shareholder Loan Agreement, IRB GTPL Shareholder Loan Agreement and IRB KTPL Shareholder Loan Agreement, respectively. The payment obligations of the respective Project SPVs in relation to such debt financing will be subordinated to all existing and future obligations of the Project SPVs towards any senior lenders;
- Any payment by the Project SPVs, including in an event of termination of the relevant concession agreement, is subject to a mandatory escrow arrangement which restricts their flexibility to utilize the available funds;
- The regulatory framework governing infrastructure investment trusts in India is still evolving and the interpretation and enforcement thereof involve uncertainties, which may have a material, adverse effect on the ability of certain categories of investors to invest in the Units, our business, financial condition and results of operations and our ability to make distributions to Unitholders;
- We may not be able to make distributions to Unitholders or the level of distributions may fall;
- Any default under the existing or future financing arrangements by any of the Project SPVs could adversely impact the Trust's ability to continue to own a majority of each of the Project SPVs, its cash flows and its ability to make distributions to Unitholders;
- The Consolidated Financial Statements may not be indicative of the Trust's future financial condition and results of operations. We may not be able to operate our business successfully or generate sufficient cash flows to make or sustain distributions;
- The TOT-12 and TOT-13 Valuation Reports, and any underlying reports, are not opinions on the commercial merits or financial condition of the SPVs proposed to be financed through the proceeds of the Issue and the valuation contained in such TOT-12 and TOT-13 Valuation Reports may not be indicative of the true value of the respective assets of IRB LTPL, IRB GTPL and IRB KTPL;
- We have referred to the data derived from Traffic Reports commissioned from the Traffic Consultant, which are based on certain bases, estimates and assumptions that are subjective in nature and may not be accurate;
- We are in the process of infusing further capital in IRB LTPL, IRB GTPL and IRB KTPL (pursuant to definitive agreements), which if not completed in a timely manner or at all, may adversely affect us; and
- If we are not successful in integrating the respective assets of IRB LTPL, IRB GTPL and IRB KTPL, our business, financial condition and results of operations may be adversely impacted.

For further discussion on factors that could cause actual results to differ from expectations, see the sections "*Risk Factors*", "*Industry Overview*", "*Business*" and "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" on pages 17, 118, 124 and 666, respectively. By their nature, certain market risk disclosures are only estimates and could be materially different from what actually occurs in the future. As a result, actual gains or losses could materially differ from those that have been estimated.

Forward-looking statements reflect current views as of the date of this Letter of Offer and are not a guarantee of future performance or returns to investors. These statements are based on certain beliefs and assumptions, which in turn are based on currently available information.

Although the Investment Manager believes the assumptions upon which these forward-looking statements are based are reasonable, any of these assumptions could prove to be inaccurate, and the forward-looking statements based on these assumptions could be incorrect. The Investment Manager, the Trustee, the Sponsor, the Lead Manager or any of their affiliates/advisors do not have any obligation to update or otherwise revise any statements reflecting circumstances arising after the date hereof or to reflect the occurrence of underlying events, even if the underlying assumptions do not come to fruition.

There can be no assurance that the expectations reflected in the forward-looking statements and financial information will prove to be correct. Given these uncertainties, Applicants are cautioned not to place undue reliance on such forward-looking statements and not to regard such statements to be a guarantee or assurance of our future performance or returns to investors.

SECTION II – RISK FACTORS

An investment in the Units involves risks. Prospective investors should carefully consider all the information in this Letter of Offer, including the risks and uncertainties described below. To obtain a complete understanding, prospective investors should read this section together with the sections "Business", "Financial Statements", "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Rights of Unitholders" on pages 124, 333, 666 and 306, respectively, as well as the other information contained in this Letter of Offer. The risks and uncertainties described in this section may not be the only risks and uncertainties the Trust and the Project SPVs currently face. Additional risks and uncertainties not presently known to the Trustee or the Investment Manager, or that the Trustee or the Investment Manager do not currently consider material, may arise or may adversely affect our business, financial condition, cash flows and results of operations. If any of the following risks, or other risks that are not currently known or are currently considered immaterial, actually occur, our business prospects, results of operations, cash flows and financial condition could suffer, the price of the Units could decline and prospective investors may lose all or part of their investment. Unless otherwise specified in the relevant risk factors, the Trustee and the Investment Manager are not in a position to specify or quantify the financial or other risks mentioned herein.

This Letter of Offer also contains forward-looking statements that involve risks, uncertainties and assumptions. The actual results of the Trust and the Project SPVs could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the considerations described below and elsewhere in this Letter of Offer.

This Letter of Offer includes (i) unaudited condensed interim consolidated financial statements of the Trust and the Project SPVs as of and for the nine-month period ended December 31, 2023; (ii) audited consolidated financial statements of the Trust and the Project SPVs as of and for the Financial Years 2023, 2022 and 2021; (iii) unaudited condensed interim standalone financial statements of the Trust as of and for the nine-month period ended December 31, 2023; and (iv) audited standalone financial statements of the Trust as of and for the Financial Years 2023, 2022 and 2021.

IRB LTPL was incorporated on November 10, 2023 and the Consolidated Financial Statements includes information for IRB LTPL since its incorporation. IRB KTPL and IRB GTPL were incorporated on January 1, 2024, i.e., after December 31, 2023. Accordingly, the Consolidated Financial Statements does not include information for IRB KTPL and IRB GTPL. Given that IRB KTPL and IRB GTPL were incorporated on the above date and have not undertaken any operations, (i) pro forma financial statements of the Trust, IRB KTPL and IRB GTPL has not been prepared; (ii) audited financial statements of IRB KTPL and IRB GTPL for the period from January 1, 2024 until the date of this Letter of Offer is not meaningful and is not included in this Letter of Offer; and (iii) summary financial statements of IRB KTPL and IRB GTPL for the above period is not meaningful and is not included in this Letter of Offer.

Investors should be aware that the price of the Units, and the income from them, may be subject to volatility. If any of the risks described below occurs, our business and prospects could be materially and adversely affected and investors could lose all or part of their original investment.

In making an investment decision, prospective investors must rely upon their own examinations and the terms of the Issue, including the merits and the risks involved. Prospective investors should consult their tax, financial and legal advisors about the particular consequences of investing in the Issue.

In this section, unless the context otherwise requires, a reference to "we", "us" and "our" refers collectively to the Trust and the Project SPVs.

Risks Related to the Structure of the Trust

1. ***The debt financing provided by the Trust to each of the Project SPVs and to be provided by the Trust to the IRB LTPL, IRB GTPL and IRB KTPL is comprised of interest-free loans, certain of which are unsecured. Such loans to be provided by the Trust will become interest-bearing at a future date in accordance with the IRB LTPL Shareholder Loan Agreement, IRB GTPL Shareholder Loan Agreement and IRB KTPL Shareholder Loan Agreement, respectively. The payment obligations of the respective Project SPVs in relation to such debt financing will be subordinated to all existing and future obligations of the Project SPVs towards any senior lenders.***

The debt financing provided by the Trust to each of the Project SPVs (except IRB LTPL, IRB GTPL and IRB KTPL) comprises certain term loans (certain of which are unsecured and interest-free) (the "**Shareholder Loans**"), which is subordinated to the debt owed to the senior lenders of the respective Project SPVs at all times. The Shareholder Loans for the Project SPVs (except PDTPL, UTL, CGTL, IRB GEPL, STPL, IRB LTPL, IRB GTPL and IRB KTPL) became interest-bearing upon the listing of the Units on the NSE, with effect from April 3, 2023. The Shareholder Loans for PDTPL and STPL will become interest-bearing from the date of completion of construction of the project and the Shareholder Loans for UTL and CGTL will become interest-bearing upon the receipt of certain consents. The Shareholder Loan for IRB GEPL became interest-bearing from the appointed date of the project. Further, the Shareholder Loans for IRB LTPL, IRB GTPL and IRB KTPL will become interest bearing from the appointed dates of the respective projects in accordance with the IRB LTPL Shareholder Loan Agreement and IRB GTPL Shareholder Loan Agreement and IRB KTPL Shareholder Loan Agreement, respectively. Also see "*Background and Structure of the Trust – Certain Agreements in relation to the Trust — Shareholder Loan Agreements*" and "*Objects of the Issue – Details of Utilization of Issue Proceeds*" on pages 110 and 69, respectively.

All payment obligations of the Project SPVs to the Trust under the Shareholder Loan Agreements are proposed to be serviced from the balance amounts remaining in the escrow accounts maintained by each Project SPV as mandated under the relevant concession agreements, after the payment of, among other things, all taxes due, all expenses in connection with the construction of the project, operations and maintenance expenses, including expenses for repair works, payment of concession fees, debt service payments to senior lenders (as defined under the relevant concession agreements), negative grants payable to the concessioning authority, reimbursement of expenditure incurred by the concessioning authority, any payments and damages due and payable and any reserve requirements set forth in the financing agreements, as defined in the relevant concession agreements (the "**Surplus Cash Flows**"). Accordingly, any reduction in the cash flows of the Project SPVs or any unanticipated increase in any of the payments to be made by the Project SPVs from the escrow accounts may result in a decrease in the Surplus Cash Flows, which may materially and adversely impact the ability of the Project SPVs to meet their payment obligations to the Trust in relation to the Shareholder Loans. Further, the receivables of each Project SPV (including the Surplus Cash Flows) are secured in favor of the existing senior lenders to the extent of the amounts payable to such senior lender pursuant to the terms of their respective financing arrangements and restrictive covenants under the financing arrangements with such senior lenders and the concession agreements prevent the Project SPVs from opening new bank accounts, and accordingly, the Project SPVs are not permitted to transfer the Surplus Cash Flows (as they arise) to a separate bank account in the name of the Project SPV that can be charged in favor of the Trust. We expect such receivables to remain secured in favor of the senior lenders until all amounts outstanding under such financing arrangements are paid in their entirety to the senior lenders. If an event were to occur under such financing arrangements such that all amounts outstanding under such financing arrangements were to become immediately due and payable, all, or substantially all, of the Surplus Cash Flows may be utilized in satisfying such payment obligations, thereby materially and adversely affecting the ability of such Project SPVs to meet their payment obligations to the Trust. Any adverse impact on any receivables payable to the Trust under such debt financing will materially and adversely affect the Trust's ability to make distributions to the Unitholders. Further, if the relevant concession agreement is terminated, the Surplus Cash Flows together with the termination payments deposited in the relevant escrow account will be applied towards the payment of the amounts outstanding to the senior lenders prior to the payment of the amounts outstanding under the Shareholder Loans. Accordingly, such amounts may be insufficient to repay all amounts outstanding under the Shareholder Loans.

2. ***Any payment by the Project SPVs, including in an event of termination of the relevant concession agreement, is subject to a mandatory escrow arrangement which restricts their flexibility to utilize the available funds.***

The escrow arrangements mandated under the concession agreements require all monies that are received by each Project SPV, including funds constituting the financing package, the fees collected from the operation of the Portfolio and any termination payments received from the concessioning authority, to be deposited in an escrow account and utilized only in accordance with the order prescribed under the escrow agreement. The consent of the concessioning authority is required to amend the order of outflow of payments from such escrow account. The escrow arrangements typically prioritize the payment of all taxes due, followed by payment of expenses in connection with the construction of the project, operation and maintenance expenses including expenses for repair works, payment of concession fees, debt service payments, negative grant/premium payable to the concessioning authority, reimbursement of expenditure incurred by the concessioning authority, any payments and damages due and payable and any reserve requirements set forth in any financing agreements. For details of the escrow arrangements, see "*Summary of the Concession Agreements*" on page 165.

With respect to withdrawals on termination, the escrow arrangements for the BOT projects typically prioritize the payment of all taxes due, followed by the payment of 90% of debt due to senior lenders (excluding subordinated debt), the payment of any outstanding concession fee, the payment of damages in relation to the concession, retentions and payments arising out of liability for any defects, the remainder of debt due, subordinated debt, operation and maintenance expenses and any other payments under the concession agreement, after which the balance may be withdrawn by the Project SPVs for their own purposes. For IRB GEPL, IRB LTPL, IRB GTPL and IRB KTPL, which are TOT projects, the withdrawals on termination under the escrow arrangement prioritize the payment of all taxes due, followed by all payments due to senior lenders, the payment of damages certified by the concessioning authority as being payable by the concessionaire, retentions and payments arising out of liability for any defects and deficiencies, operation and maintenance expenses and any other payments under the concession agreement, after which the balance may be withdrawn by the Project SPVs for their own purposes.

The Shareholder Loans will be classified as subordinated debt and equity under the concession agreements (other than to the extent of refinancing of the debt availed from existing senior lenders). Accordingly, the ability of the Trust to access such termination payments in relation to the Shareholder Loans will be subordinated to the discharge of all obligations towards the senior lenders and the payment of, among other things, any outstanding concession fees and damages. Any shortfall in the termination payments received from the concessioning authority may prevent us from recovering our investments or returns in the relevant Project SPVs adequately or at all.

3. ***The regulatory framework governing infrastructure investment trusts in India is still evolving and the interpretation and enforcement thereof involve uncertainties, which may have a material, adverse effect on the ability of certain categories of investors to invest in the Units, our business, financial condition and results of operations and our ability to make distributions to Unitholders.***

The SEBI issued the InvIT Regulations with effect from September 26, 2014. The regulations have been amended and supplemented with additional guidelines, circulars and notifications from time to time. While the InvIT Regulations historically provided a framework for unlisted infrastructure investment trusts and the Trust was initially operating under such framework, the SEBI subsequently decided to discontinue to the framework for unlisted infrastructure investment trusts, and the Trust was listed on the NSE on April 3, 2023.

Because the regulatory framework governing infrastructure investment trusts is still evolving, interpretation and enforcement by regulators and courts involves uncertainties. Further, regulations and processes with respect to certain aspects of infrastructure investment trusts, including, but not limited to, the dissolution and delisting of infrastructure investment trusts and the liabilities of Unitholders, have not yet been issued or adopted. For example, infrastructure investment trusts are not “companies” or “bodies corporate” within the meaning of various SEBI regulations. Accordingly, the applicability of several regulations to the Trust is unclear.

Infrastructure investment trusts operate in a relatively unclear regulatory environment. Changes to the Issue structure, changes to agreements entered into or proposed to be entered into in connection with the Issue, cost increases, fines, legal fees or business interruptions may result from changes to regulations, from new regulations, from new interpretations by courts or regulators of existing regulations or from stricter enforcement practices by regulatory authorities of existing regulations. In addition, new costs may arise from audit, certification and/or self-assessment standards required to maintain compliance with new and existing InvIT Regulations. Such changes in regulation, interpretation and enforcement may render it economically infeasible to continue conducting business as an infrastructure investment trust or otherwise have a material, adverse effect on our business, financial condition and results of operations.

Because we operate in an evolving and relatively untested regulatory environment, it is difficult to forecast how any new laws, regulations or standards or future amendments to the InvIT Regulations will affect infrastructure investment trusts and the infrastructure sector in India, and no assurance can be given that the regulatory system will not change in a way that will impair our ability to comply with the regulations, conduct our business, compete effectively or make distributions. Failure to comply with changes in laws, regulations and standards may have a material, adverse effect on our business, financial condition, results of operations and prospects.

4. ***We may not be able to make distributions to Unitholders or the level of distributions may fall.***

The Trust's distributions will be based on the NDCF available for distribution and not on whether the Trust makes an accounting profit or loss. The InvIT Regulations provide that not less than 90% of NDCF of each Project SPV are required to be distributed to the Trust in proportion of its holding in each of the Project SPVs subject to applicable provisions of the Companies Act. Under the InvIT Regulations, not less than 90% of the NDCF of the Trust is required be distributed to the Unitholders not less than once a year. Such distributions are required to be made not later than 15 days from the date of declaration. The Investment Manager has adopted a distribution policy pursuant to which distributions are required to be made to the Unitholders on a quarterly basis. For further details, see "*Distributions*" on page 303.

The utilization of the Issue Proceeds by the Trust is not subject to monitoring by any independent agency.

The Trust primarily relies on interest payments and principal repayments in relation to the Shareholder Loans, the subordinated debt and the unsecured loans for generating its NDCF. NDCF at the Trust level may also be generated through payment of dividends by the Project SPVs, as applicable, or buy-back of shares of the Project SPVs. Similar to the Shareholder Loans, a portion of the subordinated debt and unsecured loans of the Project SPVs (except PDTPL, UTL, CGTL, IRB GEPL, STPL, IRB LTPL, IRB GTPL and IRB KTPL) have become interest-bearing upon the listing of the Units. In relation to IRB GEPL, Shareholder Loans became interest-bearing upon the receipt of the appointed date for the project. Further, the Shareholder Loans for PDTPL and STPL will become interest-bearing from the date of completion of construction of these projects and the Shareholder Loans for UTL and CGTL will become interest-bearing upon the receipt of certain consents.

The Shareholder Loans for IRB LTPL, IRB GTPL and IRB KTPL will become interest bearing from the appointed dates of the respective projects in accordance with the IRB LTPL Shareholder Loan Agreement, the IRB GTPL Shareholder Loan Agreement and the IRB KTPL Shareholder Loan Agreement, respectively. See also "*–The Project SPVs are subject to restrictive covenants under their financing agreements that could limit our flexibility in managing our business or to use cash or other assets.*" on page 34.

There can be no assurance or guarantee that the Trust will have sufficient distributable or realized profits or surplus in any future period to make distributions quarterly in any amount or at all. The ability of the Project SPVs to service the Shareholder Loans, unsecured loans and subordinated debt and pay dividends may be affected by a number of factors including, among other things:

- their respective businesses and financial positions;
- insufficient cash flows received from the assets;
- applicable law which may restrict the payment of dividends by the Project SPVs;
- operating losses incurred by the Project SPVs in any financial year;
- changes in accounting standards, taxation laws and regulations, laws and regulations in respect of foreign exchange repatriation of funds, corporation laws and regulations relating thereto; and
- the terms of agreements, including any concession agreements or financing agreements, to which they are, or may become, a party.

Further, the method of calculation of NDCF is subject to change. Any change in the applicable law in India or elsewhere (including, for example, tax laws and foreign exchange controls) may limit the Trust's ability to pay or maintain distributions to Unitholders. No assurance can be given that the Trust will be able to pay or maintain the levels of distributions or that the level of distributions will increase over time, or that future acquisitions will increase the Trust's distributable free cash flow to Unitholders. Any reduction in, or elimination or taxation of, payments of distributions could materially and adversely affect the distributions made by the Trust.

5. *Any default under the existing or future financing arrangements by any of the Project SPVs could adversely impact the Trust's ability to continue to own a majority of each of the Project SPVs, its cash flows and its ability to make distributions to Unitholders.*

Any default under the existing or future financing arrangements by any of the Project SPVs could adversely impact the Trust's ability to own the Project SPVs, its cash flows and its ability to make distributions to Unitholders.

In addition, the lenders of the Project SPVs had issued consents in relation to the Formation Transactions pursuant to which the Project SPVs were transferred to the Trust. Such consents impose certain obligations on the Trust, including:

- the existing escrow agreement for the projects and all the toll collection arrangements to be continued;
- no dilution in security and rights of existing lenders;

- IRB group shall continue to hold 51% shareholding in the Trust during the currency of the loan;
- Prior to release of the pledged shares, the Sponsor, the Trust, the Project SPV, and the security trustee (acting on behalf of the lenders) shall execute an agreement setting out, *inter-alia*, the mechanism of and obligations of the parties in relation to the release of the pledge by the security trustee and recreation of the pledge by the Trust to the satisfaction of the lenders;
- unsecured loans availed by the Project SPV from the Trust will be subordinated to the debt from senior lenders through the currency of loan. Any payment towards unsecured loans extended by the Trust shall be governed by the clause relating to ‘restricted payment’ as per the existing financing documents; and
- any new appointment/removal of the Investment Manager/Project Manager by the Trust shall be with prior approval from lenders.

6. *The Consolidated Financial Statements and Standalone Financial Statements includes unaudited condensed interim financial statements as of and for the nine-month period ended December 31, 2023. Such information is not audited. Further, the Consolidated Financial Statements may not be indicative of the Trust's future financial condition and results of operations. We may not be able to operate our business successfully or generate sufficient cash flows to make or sustain distributions.*

This Letter of Offer includes (i) unaudited condensed interim consolidated financial statements of the Trust and the Project SPVs as of and for the nine-month period ended December 31, 2023; (ii) audited consolidated financial statements of the Trust and the Project SPVs as of and for the Financial Years 2023, 2022 and 2021; (iii) unaudited condensed interim standalone financial statements of the Trust as of and for the nine-month period ended December 31, 2023; and (iv) audited standalone financial statements of the Trust as of and for the Financial Years 2023, 2022 and 2021. For further information, see “*Financial Statements*” on page 333.

While the unaudited condensed financial statements have been prepared in accordance with applicable law and accounting standards, such information is not audited and should not be considered as a substitute for audited results for the relevant periods.

Further, the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL) were transferred to the Trust on February 25, 2020 by the Sponsor pursuant to the Formation Transactions undertaken as part of the initial offer through private placement of Units. PDTPL, IRB GEPL and STPL were consolidated with effect from such projects' appointed dates, i.e., April 2, 2022, August 12, 2023 and December 28, 2023, respectively. IRB LTPL was incorporated on November 10, 2023 and IRB KTPL and IRB GTPL were each incorporated on January 1, 2024. Accordingly, the Consolidated Financial Statements included in this Letter of Offer may not be indicative of our financial results, cash flows and financial position in the future, including pursuant to the financing of IRB LTPL, IRB GTPL and IRB KTPL and any future acquisitions.

7. *The TOT-12 and TOT-13 Valuation Reports, and any underlying reports, are not opinions on the commercial merits or financial condition of IRB LTPL, IRB GTPL and IRB KTPL and the valuation contained in such TOT-12 and TOT-13 Valuation Reports may not be indicative of the true value of the assets of IRB LTPL, IRB GTPL and IRB KTPL.*

KPMG Valuation Services LLP has been appointed to undertake valuation of IRB LTPL, IRB GTPL and IRB KTPL. The Valuer has issued the TOT-12 and TOT-13 Valuation Reports, included in *Annexure B* to this Letter of Offer, which set out its opinion as to the fair enterprise value of IRB LTPL, IRB GTPL and IRB KTPL as on January 31, 2024.

In order to issue the TOT-12 and TOT-13 Valuation Reports, the Valuer has based its assumptions regarding the traffic volume, toll rates, operation and maintenance costs, amortization, debt repayments and non-cash net working capital projections on information provided by and discussions with or on behalf of us, the Sponsor/Project Manager, the Lead Manager and the Investment Manager, and which reflects current expectations and views regarding future events and, therefore, necessarily involves known and unknown risks and uncertainties. Please see the TOT-12 and TOT-13 Valuation Reports included as *Annexure B* to this Letter of Offer for a detailed description of the assumptions and methodology. The TOT-12 and TOT-13 Valuation Reports contain forecasts, projections and other “forward-looking” statements that relate to future events, which are, by their nature, subject to significant risks and uncertainties. The future events referred to in these forward-looking statements involve risks, uncertainties and other factors which may cause the actual results or performance to be materially different from any future results or performance expressed or implied by the forward-looking statements.

The TOT-12 and TOT-13 Valuation Reports are not an opinion on the commercial merits and structure of the IRB

LTPL, IRB GTPL and IRB KTPL, nor is it an opinion, expressed or implied, as to the financial condition of the Trust upon Allotment or listing of the Units in the Issue. The TOT-12 and TOT-13 Valuation Reports do not purport to contain all the information that may be necessary or desirable to fully evaluate IRB LTPL, IRB GTPL and IRB KTPL or an investment in the Trust or the Units. The TOT-12 and TOT-13 Valuation Report s are not based on a comprehensive review of the business, operational or financial condition of IRB LTPL, IRB GTPL and IRB KTPL and, accordingly, make no representation or warranty, expressed or implied, in this regard.

The TOT-12 and TOT-13 Valuation Reports do not constitute and should not be construed as any form of assurance as to the financial condition or future performance of the Trust or as to any other forward-looking statements included therein, including those relating to certain macro-economic factors, by or on behalf of the Sponsor/Project Manager, the Investment Manager, the Trustee, the Lead Manager or their respective affiliates. Further, we cannot assure you that the valuations prepared by the Valuer reflect the true value of the net future revenues of IRB LTPL, IRB GTPL and IRB KTPL or that other valuers would arrive at the same valuation. Accordingly, the valuation contained therein may not be indicative of the true value of respective assets of IRB LTPL, IRB GTPL and IRB KTPL. The TOT-12 and TOT-13 Valuation Reports do not take into account any subsequent developments and should not be considered as a recommendation by the Sponsor, the Investment Manager, the Project Manager, the Trustee, the Lead Manager, their respective affiliates or any other party that any person should take any action based on the TOT-12 and TOT-13 Valuation Reports. Accordingly, Applicants should not rely on the TOT-12 and TOT-13 Valuation Reports in making an investment decision to subscribe to Units in the Issue.

8. ***We have referred to the data derived from Traffic Reports commissioned from the Traffic Consultant, which are based on certain bases, estimates and assumptions that are subjective in nature and may not be accurate.***

We have relied on Traffic Reports issued by the Traffic Consultant, and commissioned by the Investment Manager, to forecast the traffic volumes for the Project SPVs' projects and to prepare traffic reports on the Portfolio, which are set out in *Annexure A* to this Letter of Offer. The Traffic Reports are subject to various limitations and are based upon certain bases, estimates and assumptions that are subjective in nature and that are based, in part, on information provided by and discussions with or on behalf of us, the Sponsor/Project Manager and the Investment Manager. The Traffic Reports reflect current expectations and views regarding future events, and therefore, necessarily involve known and unknown risks and uncertainties. The Traffic Reports contain forecasts, projections and other "forward-looking" statements that relate to future events, which are, by their nature, subject to significant risks and uncertainties, including population growth, gross domestic product growth, vehicle ownership rates, per capita income, agricultural output and fuel consumption. The future events referred to in the Traffic Reports involve risks, uncertainties and other factors which may cause the actual traffic volumes to be materially different from any future traffic volumes expressed or implied by the Traffic Reports. There can be no assurance that the bases, estimates and assumptions adopted by the Traffic Consultant for the purposes of preparing the Traffic Reports will prove to be accurate. If any of these bases or assumptions is incorrect, future traffic volumes for the Portfolio could be materially different from those that are set out in the Traffic Reports and this Letter of Offer. Also see "*Presentation of Financial, Industry and Market Data – Industry and Market Data*" on page 12.

Risks Related to our Business and Industry

9. ***We are in the process of infusing further capital in IRB LTPL, IRB GTPL and IRB KTPL (pursuant to definitive agreements), which if not completed in a timely manner or at all, may adversely affect us.***

The proceeds of the Issue are proposed to be utilized for subscription to the equity shares of IRB LTPL, IRB GTPL and IRB KTPL by the Trust pursuant to the IRB LTPL Share Subscription Agreement, the IRB GTPL Share Subscription Agreement and the IRB KTPL Share Subscription Agreement, respectively. Further, the Issue proceeds will also be utilized to provide unsecured loans to IRB LTPL, IRB GTPL and IRB KTPL under the IRB LTPL Shareholder Loan Agreement, IRB GTPL Shareholder Loan Agreement and IRB KTPL Shareholder Loan Agreement, respectively. The Trust (acting through the Trustee) and the Investment Manager have entered into the IRB LTPL Share Subscription Agreement, IRB GTPL Share Subscription Agreement and IRB KTPL Share Subscription Agreement each dated March 13, 2024 and the IRB LTPL Shareholder Loan Agreement, the IRB GTPL Shareholder Loan Agreement and IRB KTPL Shareholder Loan Agreement each dated March 13, 2024 with IRB LTPL, IRB GTPL and IRB KTPL, respectively. Pursuant to the IRB LTPL Share Subscription Agreement, the IRB GTPL Share Subscription Agreement and the IRB KTPL Share Subscription Agreement, the Trust proposes to utilize a portion of the Issue proceeds to subscribe to an aggregate of 420,530,000, 103,235,000 and

39,297,500 equity shares of IRB LTPL, IRB GTPL and IRB KTPL, for a total consideration of ₹4,205.30 million, ₹1,032.35 million and ₹392.975 million, respectively. The Trust (acting through the Trustee) and the Investment Manager have also entered into the IRB LTPL Shareholder Loan Agreement, the IRB GTPL Shareholder Loan Agreement and IRB KTPL Shareholder Loan Agreement. For details, see "*Objects of the Issue – Details of Utilization of Issue Proceeds*" on page 69.

Certain ancillary agreements have also been entered into in connection with the investment in IRB LTPL, IRB GTPL and IRB KTPL, including amendments to the Framework Agreement and the Name Licensing Agreement, and the IRB LTPL Project Implementation Agreement, the IRB GTPL Project Implementation Agreement and the IRB KTPL Project Implementation Agreement.

Our ability to complete such investment is subject to certain conditions precedent and closing conditions. There can be no assurance that the conditions under the IRB LTPL Share Subscription Agreement, IRB GTPL Share Subscription Agreement and IRB KTPL Share Subscription Agreement can be completed in a timely manner or at all. Any inability or delay in satisfying any conditions may result in a delay in or failure to complete the proposed investment. Accordingly, there can be no assurance that we will be able to successfully complete the proposed investment in IRB LTPL, IRB GTPL and IRB KTPL in the manner set out in the agreements or at all.

10. *If we are not successful in integrating respective assets of IRB LTPL, IRB GTPL and IRB KTPL, our business, financial condition and results of operations may be adversely impacted.*

Certain risks associated with the proposed investments into IRB LTPL, IRB GTPL and IRB KTPL include:

- accurately judging micro-market dynamics, growth potential and competitive environment applicable to IRB LTPL, IRB GTPL and IRB KTPL, given that these are among the Trust's initial TOT projects;
- incurring unknown or unexpected potential liabilities;
- obtaining, maintaining and complying with the conditions prescribed under necessary permits certificates, licenses and approvals from governmental and regulatory authorities and agencies; and
- higher than planned expenditure to preserve and grow the value of IRB LTPL, IRB GTPL and IRB KTPL.

This could materially and adversely affect our business, results of operations and financial condition.

11. *Our failure to extend applicable concession agreements or our inability to identify and acquire new road assets that generate comparable or higher revenue, profits or cash flows than the Project SPVs may have a material adverse impact on our business, financial condition and results of operations and our ability to make distributions.*

The concession agreements of the Project SPVs stipulate a limited concession period. Certain concession agreements provide that if the actual traffic volume or revenue falls short of or exceeds the target traffic volume or revenue on a defined date, the concession period may be extended or reduced, respectively, by the concessioning authority, according to a formula specified in the agreement. The table below sets out the details of the Project SPVs' concession periods.

Project SPV	**Project**	**Concession period**	**Commencement of concession period**	**End of concession period with no reduction or extension**	**Residual concession period as of December 31, 2023 with no extension or reduction (approx.)**
AETL	Agra - Etawah NH-2 Project	24 years	August 1, 2016	July 31, 2040	16 years and 6 months and 31 days
CGTL	Gulabpura - Chittorgarh NH-79 Project	20 years	November 4, 2017	November 3, 2037	13 years, 10 months and 3 days
IRB HMTL	Hapur - Moradabad	22 years	May 28, 2019	May 26, 2041	17 years, 4 months and 26

Project SPV	Project	Concession period	Commencement of concession period	End of concession period with no reduction or extension	Residual concession period as of December 31, 2023 with no extension or reduction (approx.)
	NH-9 Project				days
IRB WTL	Goa - Kundapur NH-17 Project	28 years	March 3, 2014	March 2, 2042	18 years, 2 months and 2 days
KGTL	Kishangarh - Gulabpura NH-79/79A Project	20 years	February 21, 2018	February 20, 2038	14 years, 1 months and 20 days
KTL	Kaithal - Rajasthan Board NH-152/65 Project	27 years	July 15, 2015	July 14, 2042	18 years, 6 months and 14 days
SYTL	Solapur - Yedeshi NH-211 Project	29 years	January 21, 2015	January 20, 2044	20 years 0 months 20 days
UTL	Udaipur - Rajasthan NH-8 Project	21 years	September 3, 2017	September 2, 2038	14 years, 8 months and 2 days
YATL	Yedeshi - Aurangabad NH-211 Project	26 years	July 1, 2015	June 30, 2041	17 years and 5 months 30 days
PDTPL	Palsit-Dankuni NH-19 Project	17 years	April 2, 2022	April 1, 2039	15 years, 3 months and 1 day
IRB GEPL	Hyderabad Outer Ring Road Project	30 years	August 12, 2023	August 11, 2053	29 years, 7 months and 11 days
STPL	Samakhiyali – Santalpur NH 27 Project	20 years	December 28, 2023	December 27, 2043	19 years, 11 months and 27 days
IRB LTPL	Lalitpur – Laknadon NH-44 Project$	20 years	-	-	-
IRB KTPL	Kota Bypass and Cable Stay Bridge (NH-76)$	20 years	-	-	-
IRB GTPL	Gwalior-Jhansi (NH-44) Project$	20 years	-	-	-

$ The appointed date for IRB LTPL's, IRB GTPL's and IRB KTPL's projects have not been notified and accordingly, the concession period for these projects has not yet commenced.

As at December 31, 2023, the residual periods for the concessions of the Project SPVs whose concession period have commenced ranged from approximately 13 years, 10 months and 3 days to 29 years, 7 months and 11 days. For further details on the residual concession period of each of the Portfolio assets, see "*Business*" on page 124.

There can also be no assurance that we will be able to acquire new road assets upon the expiry of the Project SPVs' existing concession agreements or at any time thereafter. Accordingly, the number of assets forming part of our portfolio and the revenue generated by them may vary from time to time. Further, even if new road assets are added to our portfolio, there can be no assurance that such road assets will be able to generate comparable or higher cash flows, revenues and profits than the Project SPVs whose concession periods have expired. If the Project SPVs are unable to extend their concession agreements, or if we are unable to acquire new road assets that generate comparable or higher cash flows, revenue or profits than the Project SPVs, our business, financial condition and results of operations and our ability to make distributions to Unitholders may be materially and adversely affected. For further details on the terms of each of the concession agreements, see "*Summary of the Concession Agreements*" on page 165.

12. *The Project SPVs' toll-road concessions may be terminated prematurely under certain circumstances.*

The Portfolio comprises our principal assets. We will be unable to continue the operation of a particular road concession without a continuing concession right from the concessioning authority. A concession may be revoked by the concessioning authority for certain reasons set forth in the relevant concession agreement, including, but not limited to, one or more of the following:

- any failure by the relevant Project SPV to comply with prescribed minimum shareholding requirements;
- any failure by the relevant Project SPV to participate in, or match the bid of, the successful bidder in the event of any proposed augmentation of capacity of the relevant road asset;
- any failure by the relevant Project SPV to augment the capacity of the project if the average daily traffic exceeds the traffic capacity for which the project;
- any failure by the relevant Project SPV to make any payments, including negative grants, to the concession authority in a timely manner;
- any failure by the relevant Project SPV to comply with operational or maintenance standards;
- any temporary or permanent halt of operations at the relevant Project SPV;
- any occurrence of an event of default under any financing document where the lender has recalled any part of the loan;
- any continuation of a force majeure event, such as an act of God, act of war, expropriation or compulsory acquisition of any project assets by the government, industrial strikes, and civil commotions, boycotts and political agitations, beyond a specified time; and
- any failure by the relevant Project SPV to comply with any other material terms of the relevant concession agreement.

The BOT concession agreements also provide that, if the actual traffic volume exceeds the target traffic volume on a defined date, the NHAI may reduce the concession period according to a formula specified in the concession agreement or require the concessionaire to undertake additional capacity augmentation in lieu of a reduction in the concession period. For IRB GEPL, IRB LTPL, IRB GTPL and IRB KTPL, which are TOT projects, if the actual toll collections exceed the target fee collections on certain dates, as set out in the concession agreement, the concessioning authority may reduce the concession period according to a formula specified in the concession agreement.

For each of the Project SPVs, we have assumed that we will continue to operate the relevant project until the last date of the concession period as per the relevant concession agreement and have not made provisions for any reduction in the concession periods.

As at the date of this Letter of Offer, completion certificates have not been issued in relation to certain of our four-laning-to-six-laning projects, i.e., IRB WTL, PDTPL and STPL. If we are unable to complete the six-laning/construction of these projects within the timelines under the concession agreements or to the satisfaction of the NHAI, our concession agreements may be terminated by the NHAI.

AETL, KTL, SYTL, UTL and YATL have received their final completion certificates. CGTL has received a completion certificate dated August 14, 2021. IRB HMTL has received completion certificates dated July 1, 2022 and April 7, 2023. KGTL has received a completion certificate dated July 20, 2022. IRB WTL has received three provisional completion certificates. The receipt of the final completion certificate is subject to the completion of all conditions specified in the provisional completion certificates, such as quadrant pitching, avenue plantation and completion of rest areas. Certain of these activities are subject to the receipt of certain approvals and/or resources from the NHAI. If IRB WTL is unable to complete the pending items listed in the provisional certificates, its concession agreement may be terminated. For more information, see "*Government and Other Approvals – Approvals in Relation to the Project SPVs*" on page 716.

In addition, AETL, CGTL, IRB HMTL, KGTL, UTL, PDTPL and STPL are required to pay annual premiums in consideration for being granted the right to build and operate their respective projects. Failure to make such payments could result in the termination of the relevant concession agreement by the NHAI.

In accordance with the terms and conditions of the concession agreements, should threshold levels of traffic set out in the concession agreements be exceeded, the Project SPVs may be required to undertake certain development of their respective assets during an extended concession period by way of augmenting the capacity of the relevant assets. While the Project SPVs are currently in various stages of development, construction and completion, none of the Project SPVs have exceeded the levels of traffic set out in the respective concession agreements and as such, have not been required to undertake certain development of their respective assets, any future requirement to undertake such development may present additional risks to us. Certain concession agreements may impose penalties or provide for termination of such agreement for late or non-completion of certain development of the assets.

Our business, financial condition, reputation and results of operations may be materially and adversely affected if the completion of the construction of the Portfolio and/or the conditions specified in the relevant provisional completion certificate is delayed or not achieved in the specified manner. There can be no assurance that these will be completed in the time expected, or at all. Further, there is no assurance that all potential liabilities that may arise from delays or shortfall in performance of contractors will be accurately estimated as part of the planned costs of the construction of the Portfolio or conditions specified in the relevant provisional completion certificate, or that the damages that may be claimed from such contractors will be adequate to compensate any loss of revenues or profits resulting from such delays, shortfalls or disruptions. Such risks may increase if completion is delayed for an extended period. If we fail to manage any of the aforesaid risks or any unforeseen risks effectively, our revenues, profitability and results of operations could be materially and adversely affected. For further details on the events that may require the Project SPVs to undertake certain development of their respective assets as contemplated under the relevant concession agreements, see "*Business*" and "*Summary of the Concession Agreements*" on pages 124 and 165, respectively.

If a concession agreement is terminated by the concessioning authority due to a default by a Project SPV, or by a Project SPV due to a default by the concessioning authority, such Project SPV is entitled to termination payments or otherwise from the concessioning authority in accordance with the terms of the relevant concession agreement. The Shareholder Loans may be for a maturity term that exceeds the maturity term of the original facilities obtained from the senior lenders. There can be no assurance that the concessioning authority will recognize such amounts as outstanding after the term of the original facilities obtained by the Project SPVs from their respective senior lenders. There can also be no assurance that the concessioning authority will pay the termination payments promptly or at all or that any termination payments will be adequate to enable us to recover our investments or returns in the relevant Project SPVs.

If any of the concession agreements are reduced or terminated prematurely, our business, financial condition and results of operations may be materially and adversely affected. For further details on the termination of the concession agreements, the termination payments, and the definition of "default" as contemplated under the relevant concession agreements, see "*Business*" and "*Summary of the Concession Agreements*" on pages 124 and 165, respectively.

13. *A decline in traffic volumes would materially and adversely affect our business prospects, financial condition and results of operations and our ability to make distributions to Unitholders.*

The Project SPVs (except IRB LTPL, IRB GTPL and IRB KTPL) currently operate the Portfolio assets and IRB LTPL, IRB GTPL and IRB KTPL will operate their respective road assets (from the receipt of the appointed date for the relevant project). Toll revenues depend on toll receipts, which in turn depend on toll fees and traffic volumes on the toll roads. Traffic volumes are directly or indirectly affected by many external factors, including:

- toll fees;
- fuel prices in India;
- the frequency of traveller use;
- the number and affordability of automobiles;
- the quality, convenience and travel efficiency of alternative routes outside of our network of toll roads;
- the convenience and extent of a toll road's connections with other parts of the local, state and national highway networks;
- the availability and cost of alternative means of transportation, including rail networks and air transport;
- the level of commercial, industrial and residential development in areas served by the Project SPVs' projects;

- adverse weather conditions; and
- seasonal holidays.

In addition, under the terms of the concession agreements entered into by each of the Project SPVs and the NHAI, the Government and State Governments have the right to construct and open additional roads which may serve as alternate routes to the relevant Portfolio assets after the expiry of between eight and 15 years, depending on terms of the concession. The construction of such alternative roads and highways may result in a diversion of vehicular traffic from the relevant Portfolio assets and a reduction of revenue from toll receipts. Further, local roads and state highways may be improved so as to serve as alternate routes to the relevant Portfolio assets, and tolls may or may not be charged on such local roads and state highways. The existence or improvement of such alternative roads and highways may also result in a diversion of vehicular traffic from the relevant Portfolio assets and a reduction of revenue from toll receipts. For additional information on alternate routes, please see the Traffic Reports set out in *Annexure A* to this Letter of Offer. Also see "*Summary of the Concession Agreements*" on page 165.

While most of the Project SPVs' concession agreements provide for an extension in the concession period if the actual traffic volumes/toll collections are significantly lower than the target traffic volumes/toll collections set forth in the respective concession agreements, there can be no assurances that the concession period will be actually extended by the relevant concessioning authority. In the event that the actual traffic volumes are significantly less than the projected traffic volumes, the revenue generated from toll receipts may be lower than anticipated and our business prospects, financial condition and results of operations and our ability to make distributions to Unitholders may be materially and adversely affected.

14. ***We may face limitations and risks associated with debt financing, refinancing and restrictions on investment.***

We are subject to regulatory restrictions in relation to our debt financing and refinancing. We may from time to time require debt financing and refinancing to carry out the Investment Manager's investment strategy. In the event that we undertake debt financing or refinancing, we may be limited by Indian law as to the form of financing or refinancing that we may undertake. For instance, while the RBI has permitted scheduled commercial banks and certain financial institutions to lend to InvITs, such lending is subject to the conditions specified in the circular which include, *inter-alia*, banks putting in place a board-approved policy for exposure to InvITs and the determination of SPVs not being in "financial difficulty" and lending subject to such policies.

As a listed infrastructure investment trust, we are subject to the leverage limits specified under the InvIT Regulations, i.e., up to 70% of the value of the Trust Assets. Pursuant to a letter dated February 28, 2023, the SEBI has exempted us from the requirement to have a mandatory 'AAA' credit rating and a track record of six distributions to raise debt above 49% of the value of the Trust Assets and up to 70% of the value of the Trust Assets, subject to obtaining a credit rating, disclosure of such credit rating and obtaining unitholder approval. We have obtained and disclosed a credit rating for certain long-term loan facilities from CRISIL Ratings ('AAA/stable'). Pursuant to a resolution dated August 1, 2023, we have obtained Unitholder approval for increasing the threshold for borrowings to 55% of the value of the Trust Assets.

In the event that we undertake debt financing or refinancing, we may also be subject to risks associated with debt financing and refinancing, including the risk that our cash flow may be insufficient to meet required payments of principal and interest under such financing and to make distributions to Unitholders. Our ability to generate sufficient cash to satisfy our debt obligations will depend on our future operating performance, which may be affected by prevailing economic conditions and financial, business and other factors beyond our control. There is no assurance that we will be able to generate sufficient cash flow to meet all of our debt obligations. If we are unable to make payments due under our debt facilities, the lenders may be able to declare an event of default and initiate enforcement proceedings relating to any security provided in respect of the loan facilities, and/or call upon any guarantees, and this may materially and adversely affect our ability to make distributions to Unitholders. In case of default, lenders could initiate proceedings against the Trust Assets and the Trust Assets which remain after recovery of the defaulted amount would be remitted to the Unitholders on a proportionate basis. Such default may also result in the termination of certain concession agreements by the concessioning authority.

We may also be subject to certain covenants in connection with any future borrowings that may limit or otherwise materially and adversely affect our operations and our ability to make distributions to Unitholders, such as covenants restricting our ability to acquire assets or undertake other capital expenditure, requirements to set aside funds for maintenance or repayment of security deposits or requirements to maintain certain financial ratios. For further details, see "*Financial Indebtedness*" on page 689.

Further, if prevailing interest rates or other factors at the time of financing or refinancing (including changes in market conditions and maturity term imposed by any lenders) result in higher interest rates, the interest expense may be significant and may have a material and adverse effect on our cash flow and the amount of distributions available to Unitholders.

Additionally, as privately placed listed infrastructure investment trust, the Trust is permitted to invest only in "eligible infrastructure projects" as defined under the InvIT Regulations, which excludes infrastructure projects that do not meet certain thresholds. This may restrict the scope of potential acquisitions of assets in the future.

15. *A Project SPV has experienced negative cash flows during the last three financial years.*

The Project SPV set out below has experienced negative cash flows during the periods specified below.

Project SPV	Net cash flow used in operating activities (₹ in million)		
	Financial Year 2023	Financial Year 2022	Financial Year 2021
IRB WTL	(585.47)	2,784.35	854.67

Negative cash flows over extended periods, or significant negative cash flows in the short term, could materially impact our ability to operate our business and implement our construction and growth plans. As a result, our cash flows, business, financial condition and results of operations could be adversely affected.

16. *Leakage of the toll fees on the Project SPVs' roads may materially and adversely affect our revenues and financial condition.*

The Project SPVs' toll receipts are primarily dependent on the integrity of toll-collection systems and the willingness of road users to pay toll fees. While each of the Project SPVs (except IRB LTPL, IRB GTPL and IRB KTPL) has, and IRB LTPL, IRB GTPL and IRB KTPL propose to have, an integrated toll-collection system in place, the level of revenues derived from collection of tolls may be reduced by leakage through toll evasion, theft, fraud or technical defaults in the Project SPVs' toll systems or forced violations by users of the relevant Portfolio assets. Further, Project SPVs may also, at times, need to allow users of the relevant Portfolio assets to pass through without paying applicable tolls due to heavy traffic build-up, or may be unable to collect tolls due to political protests or other agitations relating to tolling. For instance, due to a protest against certain agricultural laws in India, tolling for the Kaithal – Rajasthan project operated by KTL was halted from December 25, 2020. The protest was called off on December 15, 2021 and toll collection resumed from December 16, 2021. Pursuant to a circular dated July 2, 2021 issued by the NHAI, the impact of such protest has been considered an indirect political force majeure event for purposes of the concession agreement and concessionaires would accordingly be entitled to appropriate relief with respect to the period of concession, cost of force majeure, interest payment on debt and O&M expenses. For details, see "*Management's Discussion and Analysis of our Financial Condition and Results of Operations – Factors affecting Results of Operations*" and "*Regulations and Policies*" on pages 668 and 276, respectively.

In addition, in certain circumstances, the governmental authorities or Indian courts could seek to suspend toll-collection for or during certain periods, in full or in part, on the Portfolio assets, which suspension would result in a reduction in our revenues. Further, toll-collection errors may amount to a loss of revenue as there is an inherent risk of under-collection of toll fees given that most users of toll roads pay in cash. Any significant failure by us to monitor and control leakage in toll-collection systems could have a material, adverse effect on our business, prospects, financial condition and results of operations and our ability to make distributions. See "*Summary of the Concession Agreements*" on page 165.

17. *Our business will be subject to seasonal fluctuations that may affect our cash flows.*

Our cash flows will be affected by seasonal factors, which may materially and adversely affect traffic volumes. Traffic volumes tend to decrease during the monsoon season and conversely tend to increase during holiday seasons. The monsoon season may also restrict our ability to carry on activities related to our operation and maintenance of the Portfolio. This may result in delays in periodic maintenance and reduce productivity, thereby materially and adversely affecting our business, financial condition and results of operations.

18. ***Changes in the policies adopted by governmental entities or in the relationships of any of the Trust, the Project SPVs with the Government of India or state governments could materially and adversely affect our business, financial performance and results of operations.***

The Project SPVs derive almost all of their revenue from their respective concession agreements with the relevant concessioning authority and must maintain good relationships with the concessioning authorities, the Government of India and the various state governments. We expect that we will continue to depend on, and benefit from, policies relating to the terms of the concessions and other incentives that we will receive from governmental entities in respect of the Project SPVs' existing projects and any future projects. In addition, we benefit from, and depend on, the NHAI, the relevant state concessioning authority and various Government of India and state government entities in terms of policies, incentives, budgetary allocations and other resources provided by these entities for the roads industry in general. Any adverse change in any existing governmental policies, incentives, allocations or resources, or any change in our relationships with governmental entities, could materially and adversely affect our business, financial condition and results of operations. Also see "*Regulations and Policies*" on page 276. There can be no assurance that the Government of India will continue to focus on and promote toll-road projects on a build-operate-transfer basis or a toll-operate-transfer basis.

Additionally, toll roads which involve public-private partnerships may be subject to delays, extensive internal processes, policy changes, changes due to local, national and internal political pressures and changes in governmental or external budgetary allocation and insufficiency of funds. Since governmental entities are responsible for awarding concessions and are a party to the development and operation of the awarded projects, our business will be directly and significantly dependent on their support. Any withdrawal of support or adverse changes in their policies, even if not quantifiable monetarily, may lead to the Project SPVs' concession agreements being restructured or renegotiated or the concession period being decreased, which could materially and adversely affect the Project SPVs' financing, capital expenditure, revenues, development or operations.

19. ***Certain provisions of the standard form of concession agreement may be non-negotiable or untested, and the concession agreements may contain certain restrictive terms and conditions which may be subject to varying interpretations.***

Our concession agreements were entered into with the concessioning authorities and we have limited ability to negotiate the terms of these contracts. The concession agreements that we have entered into are based on a model concession agreement prescribed by the NHAI. For example, the toll fees under the BOT project concession agreements are fixed, subject to annual adjustments to account for inflation as specified in the concession agreements and the applicable rules issued by the NHAI. In addition, the operation and maintenance standards and specifications require the Project SPVs to incur operation and maintenance costs on a regular and periodic basis. The model concession agreement prescribed by the NHAI also provides for a fixed term concession and, although all concession agreements provide for an extension or reduction of the concession period based on certain factors, including actual traffic volumes on the target date, the concession agreements do not provide for renewal of the concession agreement after the expiry of the term.

The form of the concession agreement has evolved within the last decade and there is limited guidance available on the interpretation of a number of provisions and conditions of such concession agreements. In addition, certain terms of the concession agreements, such as those related to an augmentation in the capacity of the toll roads, substitution of the concessioning authorities in any or all of the project agreements, termination payments by the concessioning authorities, construction of additional competing roads by the concessioning authorities, the Government of India or state governments and payment of compensation by the concessioning authorities for changes in law are untested. Accordingly, courts or regulators may consider a different interpretation of certain provisions and conditions in the concession agreements of the Project SPVs, which may be adverse to us.

The concession agreements of the Project SPVs also contain certain restrictive covenants. For instance, the concession agreements contain provisions that mandate substitution clauses in the project agreements. Such substitution clauses allow the concessioning authorities to step into project agreements in place of a Project SPV in the event of suspension or termination of the concession agreements due to a breach or default by such Project SPV. The concession agreements also provide that the lenders to a Project SPV may substitute the Project SPV with new concessionaires approved by the concessioning authority in the event of a default by the Project SPV under the relevant concession agreement, financing agreements or other project agreements. Additionally, pursuant to a circular dated January 29, 2014 issued by the NHAI, the NHAI or lenders may substitute the Project SPV in the event of a "financial default" by such Project SPV, which includes situations in which the NHAI or lenders have reason to believe that the Project SPV is likely to face financial distress and is likely to default in its compliance with the terms of the relevant concession agreement.

The terms of the Project SPVs' concession agreements require the Project SPVs to indemnify the concessioning authority for losses arising out of the design, engineering, construction, procurement, operation and maintenance of the toll road, defect or deficiency in the provision of services, or arising out of breach of the obligations of the Project SPVs under the relevant concession agreements, as applicable.

In the event the concessioning authority or a lender invokes any restrictive provision in the concession agreements or interprets any term or condition in an adverse manner, such invocation or interpretation may materially and adversely affect our business, financial condition and results of operations. For further details on the terms of the concession agreements, see "*Summary of the Concession Agreements*" on page 165.

20. *Certain actions of the Project SPVs require the prior approval of the relevant concessioning authority, and no assurance can be given that the concessioning authority will approve such actions in a timely manner or at all.*

Certain terms and conditions in the Project SPVs' concession agreements, financing agreements, and our other approvals require the concessioning authority's prior written approval to be obtained for one or more of the following actions, among others:

- amendment, modification or replacement by the Project SPV of any project agreements (including financing agreements) relating to the operation of the Portfolio assets to which the Project SPV is a party if the amendment, modification or replacement of such agreement increases or imposes any financial liability or obligation on the concessioning authority;
- the creation of any encumbrance or security interest over, or transfer of rights and benefits of the Project SPVs under, the concession agreements or any project agreements; and
- the selection or replacement of any engineering, procurement and construction contract, operation and maintenance contractor and execution of the engineering, procurement and construction agreements and the operation and maintenance agreements (to the extent applicable).

Pursuant to a letter dated January 3, 2020, the NHAI has approved the establishment of the Trust and the transfer of the Project SPVs to the Trust subject to certain conditions, including, (i) submission of no-objection certificates from the lenders of all the Project SPVs; (ii) the concessionaire/developer complying with all the provisions of the concession agreements including holding 51% in the Trust until two years after the completion / provisional COD of the projects; (iii) the incoming investor complying with all relevant contractual obligations of the concession agreements; (iv) the proposal not having the effect of increasing any financial liability or obligation on the NHAI and not jeopardizing the interests of NHAI in any manner; and (v) an undertaking that all statutory compliances as required by SEBI guidelines will be adhered to.

The concession agreements of the Project SPVs also require the submission to the concessioning authority, for its review and comments, all project agreements to which a Project SPV is a party prior to entry, amendment or replacement of such agreements, even if such agreements do not affect the financial liability or obligations of the concessioning authority.

The restrictions described above may impose constraints on our flexibility to conduct our business. Further, if as a result of these restrictions, we are unable to pursue a favorable course of action or to respond to an unfavorable event, condition or circumstance, then our business, financial condition and results of operations may be materially and adversely affected. For details on the terms of the concession agreements, see "*Summary of the Concession Agreements*" on page 165.

21. *We depend on certain directors, executive officers and key employees of the Investment Manager and the Project Manager, and such entities may be unable to retain such personnel or to replace them with similarly qualified personnel, which could have a material, adverse effect on the business, financial condition, results of operations and prospects of the Trust, the Project SPVs.*

Our performance depends, in part, upon the continued service and performance of certain directors, executive officers and key employees of the Investment Manager and the Project Manager. The continued operations and growth of our business will be dependent upon the Investment Manager and the Project Manager being able to attract and retain personnel who have the necessary and required experience and expertise. Competition for qualified personnel with relevant industry expertise in India is intense due to the scarcity of qualified individuals in the toll roads business, and the aforesaid entities may not be able to retain their executive officers and key employees or attract and retain fresh talent in the future. Any inability by the Investment Manager or the Project Manager to retain their respective directors, executive officers and key employees, or the inability to replace such individuals with similarly qualified personnel, could have a material, adverse effect on the business, financial condition, results of operations and prospects of the Trust, the Project SPVs.

22. ***There can be no assurance that we will be able to successfully undertake future acquisitions of road assets or efficiently manage the infrastructure road assets we have acquired or may acquire in the future.***

Our growth strategy in the future may involve strategic acquisitions of toll roads and other road assets, including pursuant to the Framework Agreement. Pursuant to the Framework Agreement, the Sponsor has agreed to certain arrangements in relation to submission of bids for (i) any new concession by the Sponsor and/or its affiliates involving the development or operation of roads and highways; or (ii) over any extensions of the concession period of road projects held by the Sponsor and/or its affiliates (other than the Project SPVs) with the Financial Investors. For details, see "*Related Party Transactions – Details of Related Party Transactions proposed to be undertaken*" and " *– The Sponsor, whose interests may be different from the other Unitholders, will be able to exercise significant influence over the Trust."* on pages 296 and 35, respectively. We may not be able to conclude appropriate or viable acquisitions in a timely manner. The success of our past acquisitions and any future acquisitions will depend upon several factors, including:

- our ability to finance and acquire operational toll roads and other road assets on a cost-effective basis;
- our ability to integrate acquired personnel, operations, products and technologies into our organization effectively;
- unanticipated problems or legal liabilities of the acquired businesses; and
- tax or accounting issues relating to the acquired businesses.

There can be no assurance that we will be able to achieve the strategic purpose of such acquisitions or operational integration or an acceptable return on such investments, which may materially and adversely affect our profits, financial condition and distributions.

Further, concession agreements for future road projects may also contain terms and conditions that are more restrictive than those under the current Project SPVs' concession agreements for the Portfolio. These restrictions may restrict our flexibility in managing our business or projects and could in turn materially and adversely affect our business prospects, financial condition and results of operations.

23. ***The Project SPVs' concessions are illiquid in nature, which may make it difficult for us to realize, sell or dispose of our shareholding in the Project SPVs.***

The Project SPVs' concessions are illiquid in nature, among other reasons, on account of market conditions, the residual periods of the concession agreements, various approvals, consents and confirmations required by the concessioning authorities as per the concession agreements, and a scarcity of disposal options and/or potential acquirers. As a result, it may be difficult for us to realize, sell or dispose of our shareholding in the Project SPVs at an attractive price, or at the appropriate time, or at all, and such illiquidity may have a material, adverse effect on our market value, business, prospects, financial condition and results of operations. Further, in addition to the restrictions on minimum holding period and divestment under the InvIT Regulations, we are required to comply with the provisions of the concession agreement including holding at least 51% of each of the Project SPVs until two years after the completion of construction / provisional COD / appointed date with respect to each of the Portfolio assets.

24. ***Our insurance policies may not provide adequate protection against all possible risks associated with our operations.***

The Project SPVs' principal types of insurance coverage include standard fire and special perils insurance, contractor all-risk insurance and money insurance. However, there can be no assurance that all possible risks are adequately insured against or that we will be able to procure adequate insurance coverage at commercially reasonable rates in the future.

Further, the Portfolio is subject to various risks that we may not be insured against, adequately or at all, including:

- changes in governmental and regulatory policies;

- shortages of, or adverse price movement for, construction materials;
- design and engineering defects;
- breakdown, failure or substandard performance of the road assets and other equipment;
- improper installation or operation of the road assets and other equipment;
- labor disturbances;
- terrorism and acts of war;
- inclement weather and natural disasters;
- environmental hazards, including earthquakes, flooding, tsunamis and landslides; and
- adverse developments in the overall economic environment in India.

Further, we are subject to various risks in the operation of the Portfolio, including on account of accidents on the Portfolio assets. For further details, see "*Material Litigation and Regulatory Action*" on page 695. Our insurance may not provide adequate coverage in certain circumstances and is subject to certain deductibles, exclusions and limits on coverage. To the extent we suffer damage or loss which is not covered by insurance, or exceed our insurance coverage, such damage or loss would have to be borne by us. We can make no assurance that material losses in excess of insurance proceeds (if any at all) will not occur in the future, which could materially and adversely affect our financial condition, business and results of operations.

25. ***The Project SPVs, the Sponsor/Project Manager, the Investment Manager and the Trustee are involved in certain legal and other proceedings, which may not be decided in their favor.***

The Project SPVs, the Sponsor/Project Manager, the Investment Manager and the Trustee are involved in legal proceedings or claims which are pending at different levels of adjudication before various courts, tribunals and regulatory authorities. For details of certain material outstanding legal proceedings, see "*Material Litigation and Regulatory Action*" on page 695. There is no assurance that these legal proceedings and regulatory matters will be decided in favor of the respective entities. Decisions in any of the aforesaid proceedings adverse to our interests may have a material, adverse effect on our or their business, future financial performance and results of operations. If the courts, tribunals or regulatory authorities decide against the Project SPVs, the Sponsor/Project Manager, the Investment Manager or the Trustee, we or such entities may face monetary and/or reputational losses and may have to make provisions in our financial statements, which could increase expenses and liabilities. While the Sponsor will provide certain indemnities under the relevant share purchase agreement in relation to the Project SPVs, there can be no assurance that the relevant Project SPV or the Trust will be able to successfully bring a claim against the Sponsor under the relevant share purchase agreements or that such indemnities will be adequate to satisfy all the losses, damages, costs and expenses suffered by the Trust and the Project SPVs arising from such proceedings (whether now or in the future) or the consequences thereof.

26. ***We do not own the "IRB" trademark and logo. Our license to use the "IRB" trademark and logo may be terminated under certain circumstances and our ability to use the trademark and logo may be impaired.***

We do not own the "IRB" trademark and "IRB" logo, which are registered in the name of, and owned by, the Sponsor. However, pursuant to a separate name licensing agreement, as amended, the Sponsor has granted to the Trust, each of the Project SPVs and the Investment Manager, the non-transferable and non-assignable right to use the IRB trademark as part of their respective corporate names, if applicable, as well as the IRB logo in connection with their respective businesses, on a non-exclusive basis. The license may be terminated under certain circumstances, including (i) if the Sponsor or any of its subsidiaries ceases to be the sponsor of the Trust for any reason whatsoever; or (ii) if the Sponsor or any of its subsidiaries ceases to hold at least 51% of the equity share capital of the Investment Manager, or an entity which is not a subsidiary of the Sponsor is appointed as the investment manager of the Trust. Upon the termination of any license, the Trust and the Project SPVs will be required to cease the use of the IRB trademark and change their names to remove IRB from their names within three months from the date of termination, which may have a material, adverse effect on the operations of the Trust and the Project SPVs and require management's time and attention.

27. ***The Portfolio is concentrated in the infrastructure sector and toll-road industry in India, and our business could be adversely affected by an economic downturn in that sector or industry. The Project SPVs' and projects are geographically concentrated in Rajasthan and Maharashtra.***

The Portfolio comprises 15 toll roads in India out of which three of the projects are awaiting appointed dates for the commencement of the concession periods for such projects. This concentration may expose us to the risk of economic downturns in the infrastructure sector and the toll-road industry to a greater extent than if our assets were more diversified across other industries in the infrastructure sector or other sectors of the economy.

As at the date of this Letter of Offer, four Portfolio assets are located in or pass through Rajasthan. Additionally, two Portfolio assets each are located in or pass through Maharashtra and Uttar Pradesh. Our business therefore will be significantly dependent on the general economic conditions, market conditions and natural disasters in the states in which we operate, in particular Rajasthan and Maharashtra. Any regional slowdown in economic activity in these areas resulting in a reduction in traffic on the Portfolio assets could materially and adversely affect our business, financial condition and results of operations.

28. ***Political and other agitations against the collection of tolls may affect our ability to collect tolls over prolonged periods, which could have a material, adverse effect on our business, results of operation and financial condition.***

Over the past few years, there have been agitations by political parties and local community members against the collection of tolls on local road and state highway projects across various states, including Maharashtra. These agitations have often turned violent and resulted in the destruction of toll-collection booths and other related property. If such events spread to the Project SPVs', which are located on national highways or other roads, it may limit our ability to collect tolls over a prolonged period and may have a material, adverse effect on our business, financial condition and results of operations. Further, the Project SPVs' concession agreements provide that in the event that the Project SPVs' ability to collect tolls is disrupted as a result of political and other agitations over a specified period, either party to the concession agreement may terminate the agreement. While the concession agreements provide for a specified payment mechanism in the case of such termination, there can be no assurance that the Project SPVs will receive such payments from the concessioning authorities in a timely manner or at all, or that such payments will be adequate to recover our investment or return, which may materially and adversely affect our business, financial condition and results of operations.

29. ***We may be unable to renew or maintain the statutory and regulatory permits and approvals required to operate the Portfolio.***

The Project SPVs are required to obtain and maintain certain permits, approvals, licenses, registrations and permissions under various regulations, guidelines, circulars and statutes regulated by various regulatory and governmental authorities for operating the Portfolio assets. Certain approvals may lapse in normal course and the respective Project SPVs make application to the appropriate authorities for renewal of such licenses and/or approvals. For further details, see "*Government and Other Approvals*" on page 715. Under the Project Implementation Agreements, the Project Manager is responsible for the maintenance of such approvals. In relation to the obligations of the Project Manager under the Project Implementation Agreements, see "*The Sponsor and Project Manager – Functions, Duties and Responsibilities of the Project Manager*" on page 314. If the Project Manager, the Project SPVs and/or the third-party contractor(s) fail to obtain or maintain them, or if there is any delay in obtaining or renewing them, our business, financial condition and results of operations could be materially and adversely affected. Further, these permits, approvals, licenses, registrations and permissions could be subject to several conditions, and we can make no assurance that we would be able to continuously meet such conditions or be able to prove compliance with such conditions to the statutory authorities. This could lead to the cancellation, revocation or suspension of relevant permits, licenses or approvals, which may result in the interruption of our operations and may materially and adversely affect our business, financial condition and results of operations.

30. ***Compliance with, and changes in, safety, health and environmental laws and regulations in India may materially and adversely affect our business.***

Our business will be subject to environmental, health and safety laws and regulations and various labor, workplace and related laws and regulations in India and requirements under the concession agreements. For further details, see "*Regulations and Policies*" on page 276. Any changes in, or amendments to, these standards or laws and regulations could further regulate our business and could require us to incur additional, unanticipated expenses in order to comply with these changed standards. Under the Project Implementation Agreements, the Project Manager is responsible for the maintenance of such requirements and standards. In relation to the obligations of the Project Manager under the Project Implementation Agreements, see "*The Sponsor and Project Manager – Functions, Duties and Responsibilities of the Project Manager*" on page 314. If we fail to meet safety, health and environmental requirements, we may also be subject to administrative, civil and criminal proceedings by governmental authorities, as well as civil proceedings by environmental groups and other individuals, which could result in substantial fines and penalties against us. Penalties imposed by regulatory authorities on us or third parties upon whom we depend may also disrupt our business and operations.

There can be no assurance that we will not become involved in future litigation or other proceedings or be held responsible in any such future litigation or proceedings relating to safety, health and environmental matters in the future. Clean-up and remediation costs, as well as damages, payment of fines or other penalties, other liabilities and related litigation, could materially and adversely affect our business, prospects, financial condition and results of operations.

31. *The Project SPVs' financing agreements entail interest at variable rates, and any increases in interest rates may adversely affect our results of operations, financial condition and cash flows.*

The Project SPVs are susceptible to changes in interest rates and the risks arising therefrom. For details, see "*Financial Indebtedness*" on page 689. These financing agreements entail interest at variable rates with a provision for the periodic reset of interest rates. Currently, certain of the Project SPVs' borrowings are at floating rates of interest. Further, under the Project SPVs' financing agreements, the lenders are entitled to change the applicable rate of interest depending upon the policies of the RBI and in the event of an adverse change in the Project SPVs' credit risk rating. Any increase in interest rates may have an adverse effect on our results of operations, financial condition and cash flows.

32. *The Project SPVs are subject to restrictive covenants under their financing agreements that could limit our flexibility in managing our business or to use cash or other assets.*

Various financing agreements that the Project SPVs have entered into with certain banks and financial institutions contain certain restrictive covenants, including, but not limited to, requirements that they obtain consent from the lenders prior to:

- effecting any change in the nature or scope of the project or any change in the financing plan;
- effecting any change in capital structure (including shareholding pattern);
- raising any equity or preference share capital;
- making any capital expenditure other than permitted investments;
- making any dividend payments to the Trust or making any other restricted payments (including redemption of any shares of any class, prepayment in relation to any indebtedness, payment of interest on unsecured loans, investment in any entity) except as permitted under the financing agreements;
- creating of any security interest in any of the secured property;
- incurring any other indebtedness, including the issuance of debentures, other than permitted indebtedness;
- entering into any partnership, profit-sharing or royalty agreement;
- removing any person exercising substantial powers of management over the affairs of the Project SPVs in case of an event of default;
- amending the constitutional documents of the Project SPVs;
- undertaking of any new project or making of any investment or taking any assets on lease;
- providing guarantees, indemnities or similar assurances in respect of indebtedness of any other person, (other than in the ordinary course of business);
- repaying or prepaying any subordinated loan or loans brought in as equity taken by the Project SPVs from the Sponsor;
- creating any subsidiary or permit the Project SPV to become a subsidiary;
- undertaking or permitting any scheme of arrangement or compromise with its creditors or shareholders; and
- changing the management/management control or the composition of the board of directors of any Project SPV.

For details, see "*Financial Indebtedness*" on page 689. In addition, these restrictive covenants may also affect some of the Trust's rights as the shareholder of the Project SPV and the Project SPV's ability to pay dividends if it is in breach of its obligations under the applicable financing agreement.

In case of any shortfall in project receivables, the relevant Project SPV may need to make good the shortfall from its own sources and/or arrange for the loan to be repaid through revenue shortfall loans from the relevant concession authority. Such financing agreements also require us to maintain certain financial ratios. In the event of any breach of any covenant contained in these financing agreements, we may be required to immediately repay our borrowings either in whole or in part, together with any related costs. There can be no assurance that we will be able to secure consents from, and/or negotiate revised terms with, the lenders on terms favorable to the Trust or at all.

Further, the financing agreements also contain cross default provisions which could automatically trigger defaults under other financing agreements. Certain lenders are also entitled to accelerate the repayment of the loans at any time based on the lenders' assessment of the cash flows, subject to any approval required from the concessioning authority.

If the Project SPV is suspended under the concession in relation to any default by such Project SPV, at any time during such suspension, the senior lenders of each Project SPV have the right to request the concessioning authority to substitute the concessionaire in accordance with the substitution agreement.

Any downgrading of the credit rating of the Project SPVs by a credit rating agency or any adverse comment from the statutory auditors of such Project SPV or the Trust may qualify as an event of default under the relevant financing agreements of the Project SPVs. Certain financing agreements also provide the banks and financial institutions with the right to convert amounts due into equity in the event of default, with the approval of the relevant concessioning authority. Certain of these banks and financial institutions also have a right to appoint nominee directors under these financing agreements in the event of default. Pursuant to the provisions of certain loan facilities availed by us, the lenders are entitled to recall the loan at any time on demand or call notice, requiring the borrower to repay (either in full or in part) the amount outstanding on any particular day.

Any or all of the above restrictive covenants may restrict our ability to conduct business and any breach thereof may adversely affect our results of operations and financial condition.

33. ***Shares of the Project SPVs are required to be pledged in favor of lenders who may exercise their rights under the respective share pledge agreements in the event of default under relevant financing agreements.***

Shares of the Project SPVs are required to be pledged in favor of the lenders to such Project SPVs to secure loan facilities obtained by the Project SPVs. 51% of the equity share capital of each of the Project SPVs (except IRB LTPL, IRB GTPL and IRB KTPL) has been pledged in favor of their respective lenders and after the completion of the proposed investment in IRB LTPL, IRB GTPL and IRB KTPL, not more than 51% of the equity share capital of each of these Project SPV is proposed to be pledged in favor of its lenders, if applicable, in accordance with the relevant financing documents.

If there are any defaults in payment or any breach under the relevant financing agreements, the lenders may exercise their right to enforce the security interest under the financing agreements, including by taking ownership of the pledged shares, selling the pledged shares to any third-party purchaser, and exercising voting rights in respect of the pledged shares on any matter at any meeting of the members of the relevant Project SPVs. If any such event occurs, we may not be able to fully recognize revenue attributable to these Project SPVs, if at all. In addition, if we lose ownership or control of any of our Project SPVs, our business, results of operations and financial condition, and our ability to make distributions, would be adversely affected.

34. ***We will enter into related-party transactions. There can be no assurance that we could not have achieved more favorable terms if such transactions had been entered into with third parties.***

We will continue to enter into transactions with related parties, subject to and in accordance with the terms of the Framework Agreement. The procedure with respect to such related party transactions is subject to modification by law, which may have a material, adverse effect on the Trust. Further, there can be no assurance that we could not achieve more favorable terms had such transactions been entered into with unrelated parties. The transactions that we will enter into may involve conflicts of interest which may be detrimental to us. See "*Related Party Transactions*" on page 294. There can be no assurance that such transactions, individually or in the aggregate, will not have a material, adverse effect on our business, financial condition and results of operations, including because of potential conflicts of interest or otherwise.

Risks Related to the Trust's Relationships with the Sponsor and the Investment Manager

35. ***The Sponsor, whose interests may be different from the other Unitholders, will be able to exercise significant influence over the Trust.***

After the completion of the Issue, the Sponsor is expected to own a maximum of 51.02% of the issued and outstanding Units and will be entitled to vote as a Unitholder on all matters other than matters where it is a related party and not permitted to vote under the InvIT Regulations. Although the Investment Manager has a distinct board of directors, the Sponsor is nonetheless in a position to exercise significant influence in matters which require the approval of Unitholders by virtue of its ownership of Units in the Trust. The interests of the Sponsor may conflict with the interests of our other Unitholders and the Sponsor may, for business considerations or otherwise, seek to benefit itself instead of the Trust or the interests of the other Unitholders. The Sponsor also exercises significant influence over the Investment Manager.

We also rely on the Sponsor to comply with its obligations under the various transaction agreements to which it is a party, including the Framework Agreement. Pursuant to the Framework Agreement, the Sponsor has agreed that prior to the submission of a Bid (as defined under the Framework Agreement) for any Potential Project (as defined under the Framework Agreement), it will consult the Financial Investors in good faith and make best efforts to bid for the Potential Project on behalf of the Trust on such terms as agreed between Sponsor and the Financial Investors. If the Sponsor and the Financial Investors are unable to reach an agreement in relation to the terms of the Bid within a reasonable period, the Sponsor will be free to submit a Bid as it deems fit for the Potential Project provided such Bid is not on terms and conditions less favorable than the terms and conditions proposed by the Financial Investors.

In addition, as our Project Manager, we rely on the Sponsor to provide construction works for the Project SPVs which are not yet completed and operation and maintenance services for the completed Project SPVs. Pursuant to the Project Implementation Agreements, IRB WTL and PDTPL will continue to make payments to the Project Manager for the remaining engineering, procurement and construction works in relation to the relevant project on a monthly basis, or as otherwise agreed among the parties to the Project Implementation Agreements based on invoices raised by the Project Manager. Any such payment of fees will be in the nature of a related party transaction and the relevant approvals would be required under the InvIT Regulations. For further information about the fees payable to the Project Manager, please see "*Background and Structure of the Trust – Fees and Expenses*" on page 116.

We also rely on the Sponsor's expertise in executing build-operate-transfer projects in case of any additional work which we may be required to carry out for any of the Project SPVs or other assets. In the event that the Sponsor does not continue to focus on the infrastructure development sector or the toll-road industry, our business strategy, financial condition and results of operations may be materially and adversely impacted.

36. ***The Sponsor is a listed company, operates other road assets and has sponsored another infrastructure investment trust ("Public InvIT"), and anything that impacts the business, results of operations and trading price of the Sponsor's equity shares or the units of the Public InvIT may have a material adverse effect on the Trust.***

The Sponsor has been listed on the Stock Exchanges since 2008. The Sponsor has also previously sponsored the Public InvIT, which has been listed on the Stock Exchanges since 2017 and is also engaged in the toll-roads sector. As at December 31, 2023, the Sponsor had six road projects of which two were operational and four were under-construction. The Public InvIT currently has a portfolio of six toll-road projects, comprising 5 BOT projects and 1 HAM asset. Because of our relationship with the Sponsor and its future toll-road assets, anything that impacts the business, results of operations and trading price of the Sponsor's equity shares or the Public InvIT's units may have a material, adverse effect on the Trust.

The Sponsor is subject to ongoing disclosure obligations under applicable regulations. To the extent that business, financial or other information relating to the Trust and its Project SPVs, including any forward-looking information, can be derived from filings made by the Sponsor with the Stock Exchanges, investors are reminded that such information has not been and will not be prepared for purposes of the Issue and does not form a part of this Letter of Offer.

37. ***The Investment Manager may not be able to implement its capital and risk management strategies.***

There is no assurance that the Investment Manager will be able to implement these strategies successfully or that it will be able to expand our portfolio at any specified rate or to any specified size or to maintain distributions at projected levels. The Investment Manager may not be able to make acquisitions or investments on favorable terms or within a desired time frame, and it may not be able to manage the operations of its underlying assets in a profitable manner. Factors that may affect this risk may include, but are not limited to, changes in the regulatory framework in India, competition for assets, partial award of concessions or licenses favoring local or other competitors of the

Trust, changes in the Indian regulatory or legal environment or macro-economic conditions. If the Investment Manager is unable to implement these strategies successfully or expand our portfolio, we will nonetheless be required to pay the Investment Manager an annual management fee, which may be revised with the approval of the Unitholders such that the votes cast in favor of the resolution are not less than one-and-a-half times the votes against such resolution, in accordance with the terms of appointment of the Investment Manager.

Even if the Investment Manager is able to successfully grow the operating business of the underlying assets and to acquire toll roads and other eligible infrastructure projects in India, there can be no assurance that the Investment Manager will achieve any returns on such acquisitions or capital investments.

38. ***Parties to the Trust are required to maintain the eligibility conditions specified under Regulation 4 of the InvIT Regulations on an ongoing basis. The Trust may not be able to ensure such ongoing compliance by the Sponsor/Project Manager, the Sponsor Group, the Investment Manager and the Trustee, which could result in the cancellation of the registration of the Trust.***

Parties to the Trust are required to maintain the eligibility conditions specified under Regulation 4 of the InvIT Regulations on an ongoing basis. These eligibility conditions include, among other things, that (a) the Sponsor, Investment Manager and Trustee are separate entities, (b) the Sponsor has a net worth of not less than ₹1,000 million and has a sound track record in the development of infrastructure or fund management in the infrastructure sector, (c) the Investment Manager has a net worth of not less than ₹100 million and has not less than five years' experience in fund management or advisory services or development in the infrastructure sector or the combined experience of the directors/partners/employees of the investment manager in fund management or advisory services or development in the infrastructure sector is not less than 30 years (provided that for computing the combined experience, only the experience of the directors/partners/employees with more than five years of experience in fund management or advisory services or development in the infrastructure sector shall be considered), (d) the Trustee is registered with the SEBI under Securities and Exchange Board of India (Debenture Trustees) Regulations, 1993 and is not an associate of the Sponsor or Investment Manager and (e) each of the Sponsor/Project Manager, members of the Sponsor Group, the Investment Manager and the Trustee are "fit and proper persons" as defined under Schedule II of the Intermediaries Regulations on an ongoing basis. The Trust may not be able to ensure such ongoing compliance by the Sponsor/Project Manager, members of the Sponsor Group, the Investment Manager and the Trustee, which could result in the cancellation of the registration of the Trust.

39. ***The Investment Manager is required to comply with certain ongoing reporting and management obligations in relation to the Trust. There can be no assurance that the Investment Manager will be able to comply with such requirements.***

The Investment Manager is required to comply with certain ongoing reporting and management obligations in relation to the Trust in accordance with the InvIT Regulations. These requirements include, among other things, (a) making investment decisions with respect to the underlying assets or projects of the Trust, (b) overseeing the activities of the Project Manager, (c) investing and declaring distributions in accordance with the InvIT Regulations, (d) submitting reports to the Trustee and (e) ensuring the audit of the Trust's accounts. There can be no assurance that the Investment Manager will be able to comply with such requirements in a timely manner or at all, which could subject the Investment Manager, the other parties to the Trust, the Trust or any person involved in the activity of the Trust to applicable penalties under the InvIT Regulations, the Intermediaries Regulations and/or the SEBI Act. Any such failure to comply or the imposition of any penalty could have a material adverse effect on our business, financial condition and results of operations. Under the InvIT Regulations, the SEBI also has the right to inspect documents, accounts and records relating to the activity of the Trust, the SPVs or Parties to the InvIT and may issue directions in the nature of, *inter-alia*, (i) requiring the Trust to surrender its certificate of registration; (ii) requiring the Trust to wind-up; (iii) requiring the Trust to sell its assets; (iv) requiring the Trust or Parties to the Trust to take such action as may be in the interest of investors; or (v) prohibiting the Trust or Parties to the Trust from operating in the capital markets or from accessing the capital markets for a specified period.

Risks Related to India

40. ***Changing laws, rules and regulations, including changes in legislation or the rules relating to tax regimes, legal uncertainties and the political situation in India may materially and adversely affect our business, financial condition and results of operations.***

Our business, financial condition and results of operations could be materially and adversely affected by any change in laws or interpretations of existing, or the promulgation of new, laws, rules and regulations applicable to us and our business. There can be no assurance that the Government of India or the state governments will not implement new regulations and policies which will require the Trust or the Project SPVs to obtain additional approvals and licenses from governmental and other regulatory bodies or impose onerous requirements and conditions on our operations.

Tax laws and regulations are subject to differing interpretations by tax authorities. Differing interpretations of tax and other fiscal laws and regulations may exist within governmental ministries, including tax administrations and appellate authorities, thus creating uncertainty and potential unexpected results. The degree of uncertainty in tax laws and regulations, combined with significant penalties for default and a risk of aggressive action, including by retrospective legislation, by the governmental or tax authorities, may result in tax risks in the jurisdictions in which we operate being significantly higher than expected. These events may result in a material, adverse effect on our business, financial condition, results of operations and prospects. Tax authorities in India may also introduce additional or new regulations applicable to our business which could adversely affect our business and profitability.

The Government of India has implemented two major reforms in Indian tax laws, namely the goods and services tax and provisions relating to General Anti-Avoidance Rules. Given the relatively recent implementation of these laws, the manner of implementation of these tax regimes could create uncertainty.

The right to own property in India is subject to restrictions that may be imposed by the Government of India. In particular, the Government of India under the provisions of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 ("**Land Acquisition Act**") has the right to compulsorily acquire any land if such acquisition is for a "public purpose," after providing compensation to the owner. However, the compensation paid pursuant to such acquisition may not be adequate to compensate the owner for the loss of such property. The likelihood of such acquisitions may increase as central and state governments seek to acquire land for the development of infrastructure projects such as roads, railways, airports and townships. While the NHAI or the relevant concessioning authority is responsible for the acquisition of the land underlying the toll-road infrastructure projects, any delays or disputes relating to such acquisition could lead to delays and disruptions in the execution of our projects, which would have a material adverse effect on our business, financial condition and results of operations.

The Competition Act, 2002, as amended (the "**Competition Act**"), regulates practices having an appreciable adverse effect on competition in the relevant market in India. The Competition Act aims to, among other things, prohibit all agreements and transactions which may have an appreciable adverse effect on competition in India. Further, the CCI has extra-territorial powers and can investigate any agreements, abusive conduct or combination occurring outside India if such agreement, conduct or combination has an appreciable adverse effect on competition in India. In the event that that any of the assets proposed to be acquired by us in the future cross the prescribed thresholds, we cannot assure you that we will receive the necessary approvals from the CCI to consummate such transactions. Any prohibition or substantial penalties levied under the Competition Act could materially and adversely affect our financial condition and results of operations. Any adverse impact on our financial condition or operations due to the Competition Act may have a material adverse impact on our business, financial condition, results of operations and prospects and our ability to make distributions to the Unitholders.

41. ***Significant increases in the price or shortages in the supply of crude oil and products derived therefrom, including petrol and diesel fuel, could materially and adversely affect the volume of traffic at the projects operated by the Project SPVs and the Indian economy in general, including the infrastructure sector.***

India imports a significant majority of its requirements of crude oil. Crude oil prices are volatile and are subject to a number of factors, including the level of global production and political factors, such as war and other conflicts, particularly in the Middle East, where a substantial proportion of the world's oil reserves are located. The ongoing Russia-Ukraine war has caused significant volatility in the price of crude oil and impacted fuel prices in India. Further increases in the price of or shortages in the supply of crude oil could materially and adversely affect the volume of traffic at the projects operated by the Project SPVs and materially and adversely affect the Indian economy in general, including the infrastructure sector, which could have a material, adverse effect on our business, financial condition and results of operations.

42. ***Our business is dependent on economic growth in India and financial stability in Indian markets, and any slowdown in the Indian economy or in Indian financial markets could have a material adverse effect on our business.***

The Trust is registered in India, and all of our assets are located in India. As a result, we are highly dependent on the prevailing economic conditions in India and our results of operations are significantly affected by factors influencing the Indian economy. Factors that may adversely affect the Indian economy, and hence our results of operations, may include:

- any increase in interest rates or inflation in India;
- any exchange rate fluctuations;
- any scarcity of credit or other financing in India;
- prevailing income, consumption and saving conditions among consumers and corporations in India;
- changes in India's tax, trade, fiscal or monetary policies;
- political instability, terrorism or military conflict in India or in countries in the region or globally, including in India's various neighboring countries;
- the occurrence of natural or man-made disasters, pandemics or epidemics;
- prevailing regional or global economic conditions;
- the balance of trade movements, including export demand and movements in key imports, including oil and oil products; annual rainfall which affects agricultural production;
- civil unrest, riots, protests, acts of violence, terrorist attacks, regional conflicts or situations or war involving India or other countries could materially and adversely affect the financial markets, which could impact our business; and
- other significant regulatory or economic developments in or affecting India or its infrastructure sector.

Any slowdown or perceived slowdown in the Indian economy, or in specific sectors of the Indian economy, could have a material, adverse effect on our business, financial condition and results of operations and the price of the Units.

For instance, during the COVID-19 pandemic, the NHAI had temporarily suspended toll collection at toll plazas across India from March 26, 2020. Toll collection subsequently resumed on April 20, 2020. In addition, during the months of April 2021 and May 2021, due to the measures implemented in the states where our projects are under construction, by the respective State Governments, our project sites were required to occasionally close down for short periods of time. Further, from the second fortnight of April 2021, various State Governments imposed restrictions on travel, which led to a decline in our toll collections during the period. Traffic and toll revenue on the Portfolio may continue to be impacted as a result of such restrictions or economic slowdown caused by COVID-19, which may adversely affect our cash flows, operating results, businesses, assets, financial condition, performance, ability to access the equity and debt markets, cost of capital and liquidity and prospects.

Further, the Indian economy and Indian financial market are influenced by economic and market conditions in other countries, particularly in emerging market in Asian countries. Financial turmoil in Asia, Europe, the United States and elsewhere in the world in recent years, as well as the ongoing Russia-Ukraine war and Israel-Hamas conflict, has affected the Indian economy. Bank collapses in the United States and globally have historically contributed to instability in the global banking system. Although economic conditions are different in each country, investors' reactions to developments in one country can have a material, adverse effect on the securities of companies in other countries, including India. A loss in investor confidence in the financial systems of other emerging markets may cause increased volatility in Indian financial markets and, indirectly, in the Indian economy in general. Any global financial instability, including any instability related to relation between the United States and China, as well as India and China, could also have a negative impact on the Indian economy. Financial disruptions may occur again and could harm our results of operations and financial condition.

43. *Any downgrading of India's sovereign debt rating by a domestic or international rating agency could materially and adversely affect our ability to obtain financing and, in turn, our business and financial performance.*

India's sovereign debt rating could be downgraded due to various factors, including changes in tax or fiscal policy or a decline in India's foreign exchange reserves, which are outside of our control. Any adverse revisions to India's credit ratings for domestic and international debt by domestic or international rating agencies may materially and adversely impact our ability to raise additional financing, and the interest rates and other commercial terms at which any such additional financing is available. This could have a material, adverse effect on our business and financial performance, ability to obtain financing for capital expenditures and the price of the Units.

44. ***Fluctuations in the exchange rate of the Indian Rupee with respect to the U.S. Dollar or other currencies will affect the foreign currency equivalent of the value of the Units and any distributions.***

Fluctuations in the exchange rates between the Indian Rupee and other currencies will affect the foreign currency equivalent of the Indian Rupee price of the Units. Such fluctuations will also affect the amount that holders of the Units will receive in foreign currency upon conversion of any cash distributions or other distributions paid in Indian Rupees by us on the Units, and any proceeds paid in Indian Rupees from any sale of the Units.

Risks Related to Ownership of the Units

45. ***It may not be possible for Unitholders to enforce foreign judgements.***

The Trustee, the Investment Manager and the Sponsor are incorporated in India and the Trust is settled and registered in India. All of our assets are located in India and we may, from time to time, invest in toll roads in India. Where investors wish to enforce foreign judgements in India, where our assets are or will be located, they may face difficulties in enforcing such judgements. India is not a party to any international treaty in relation to the recognition or enforcement of foreign judgements. India exercises reciprocal recognition and enforcement of judgements in civil and commercial matters with a limited number of jurisdictions, including Singapore. In order to be enforceable, a judgement obtained in a jurisdiction which India recognizes as a reciprocating territory must meet certain requirements of the Code of Civil Procedure, 1908 ("**Civil Code**"). Further, the Civil Code only permits enforcement of monetary decrees not being in the nature of any amounts payable in respect of taxes, or other charges of a like nature or in respect of a fine or other penalty and does not provide for the enforcement of arbitration awards even if such awards are enforceable as a decree or judgement. Judgements or decrees from jurisdictions not recognized as a reciprocating territory by India cannot be enforced or executed in India except through a fresh suit upon judgement. Even if we or a Unitholder were to obtain a judgement in such a jurisdiction, we or it would be required to institute a fresh suit upon the judgement and would not be able to enforce such judgement by proceedings in execution. In addition, the party which has obtained such judgement must institute the new proceedings within three years of obtaining the judgement. It is unlikely that an Indian court would award damages on the same basis or to the same extent as was awarded in a judgement rendered by a foreign court if the Indian court believed that the amount of damages awarded was excessive or inconsistent with public policy in India. In addition, any person seeking to enforce a foreign judgement in India is required to obtain prior approval of the RBI to repatriate outside India any amount recovered pursuant to the execution of the judgement.

Consequently, it may not be possible to enforce in an Indian court any judgement obtained in a foreign court, or effect service of process outside of India, against Indian companies, their directors and executive officers, and any other parties resident in India. Additionally, there is no assurance that a suit brought in an Indian court in relation to a foreign judgement will be disposed of in a timely manner.

46. ***The Trust may be dissolved, and the proceeds from the dissolution thereof may be less than the amount invested by the Unitholders.***

The Trust is an irrevocable trust registered under the Registration Act and it may only be extinguished, dissolved and terminated in accordance with the InvIT Regulations and other applicable law. Under the Indenture of Trust, in the event of dissolution, the net assets of the Trust, remaining after settlement of all liabilities, and the retention of any reserves which the Trustee deems to be necessary to discharge contingent or unforeseen liabilities, shall be paid to the Unitholders. Should the Trust be dissolved, depending on the circumstances and the terms upon which assets of the Trust are disposed of, there is no assurance that a Unitholder will recover all or any part of its investment. There may also be uncertainty around the interpretation and implementation of certain provisions in relation to the insolvency of a trust under the Insolvency and Bankruptcy Code, 2016.

47. ***The reporting requirements and other obligations of infrastructure investment trusts are still evolving. Accordingly, the level of ongoing disclosures made to and the protection granted to Unitholders may be more limited than those made to or available to the shareholders of a listed company in India.***

The InvIT Regulations, along with the guidelines and circulars issued by the SEBI from time to time, govern the affairs of infrastructure investment trusts in India. However, as compared to the statutory and regulatory framework governing listed companies in India, the regulatory framework applicable to infrastructure investment trusts is relatively new and thus, still evolving.

Accordingly, the ongoing disclosures made to Unitholders under the InvIT Regulations may differ from those made to the shareholders of a listed company in accordance with the applicable SEBI regulations. Further, the rights of the Unitholders may not be as extensive as the rights of the shareholders of a listed company and accordingly, the protection available to the Unitholders may be more limited than those available to such shareholders.

48. *The Issue Price may not be indicative of market price of the Units after the Issue and the price of the Units may decline after the Issue.*

The Issue Price determined by the Investment Manager, in consultation with the Lead Manager, may not be indicative of the price of the Units upon completion of the Issue. If the price of the Units declines significantly, Eligible Unitholders may be unable to resell their Units at or above their purchase price, if at all. There can be no assurance that the price of the Units will not fluctuate or decline significantly in the future. The price and value of the Units will depend on many factors, including, among others:

- the perceived prospects of our business and investments and the market for toll roads and other infrastructure projects;
- differences between our actual financial and operating results and those expected by investors and analysts;
- the perceived prospects of future toll roads and other infrastructure projects that may be added to our portfolio in accordance with our investment mandate;
- changes in general economic or market conditions;
- the market value of our assets;
- the perceived attractiveness of the Units against those of other business trusts, equity or debt securities;
- the balance of buyers and sellers of the Units;
- the size and liquidity of the Indian business trusts market;
- any changes to the regulatory system, including the tax system, both generally and specifically in relation to India business trusts;
- the ability of the Investment Manager to implement successfully its investment and growth strategies;
- foreign exchange rates;
- variations in our quarterly operating results;
- additions or departures of key management personnel of the Investment Manager and/or the Project SPVs;
- changes in the amounts of our distributions, if any, and changes in the distribution payment policy or failure to execute the existing distribution policy;
- actions by Unitholders;
- changes in market valuations of similar business entities or companies;
- announcements by us or our competitors of significant contracts, acquisitions, disposals, strategic partnerships, joint ventures or capital commitments;
- speculation in the press or investment community;
- fluctuations in stock market prices and volume;
- general economic and stock market conditions; and
- changes or proposed changes in laws or regulations affecting the road industry and infrastructure development in India or enforcement of these laws and regulations, or announcements relating to these matters.

To the extent that we retain operating cash flow for investment purposes, working capital reserves or other purposes, these retained funds, while increasing the value of our underlying assets, may not correspondingly increase the price of the Units. Our performance with regard to future earnings and distributions may materially and adversely affect the market price of the Units. In addition, Unitholders who do not, or are not able to, participate in a new issuance of Units may experience a dilution of their interest in the Trust. The Units are not capital-safe products and there is no guarantee that Unitholders can regain the amount invested, in full or in part. If the Trust is extinguished, it is possible that investors may lose a part or all of their investment in the Units.

49. *Any future issuance of Units by us or sales of Units by the Sponsor or any of other significant Unitholders may dilute your Unitholding.*

Any future issuance of Units by us could dilute investors' holdings of Units. Any such future issuance of Units could impact our ability to raise capital through an offering of our securities. There can be no assurance that we will not issue further Units. Upon completion of the Issue, 568,039,840 Units (constituting approximately 51% of the total number of Units on a post-Issue basis) are expected be held by the Sponsor. While the Sponsor has agreed to certain *inter-se* arrangements in relation to the sale of its Unitholding with the Financial Investors and pre-emptive rights in case of any further issue of Units, if the Sponsor (pursuant to any applicable waivers), directly or indirectly, sells or is perceived as intending to sell a substantial number of its Units, the price for the Units could be materially and adversely affected. These sales may also make it more difficult for us to raise capital through the issue of new units at a time and at a price we deem appropriate. We cannot assure you that the Unitholders, including the Sponsor (subject to the terms of the Framework Agreement), and other significant Unitholders, will not dispose of, pledge or otherwise encumber their Units. For details of the *inter-se* arrangements, see "*Background and Structure of the Trust – Certain Agreements in relation to the Trust – Framework Agreement*" and "*Rights of Unitholders*" on pages 104 and 306, respectively.

50. *Our rights and the rights of the Unitholders to recover claims against the Investment Manager or the Trustee are limited.*

Under the Investment Management Agreement, the Investment Manager is not liable for, among other things, any action for any investment decision taken in respect of the Trust, other than for fraud, gross negligence, or wilful misconduct on the part of the Investment Manager.

Pursuant to the Indenture of Trust, the Trustee is not liable for anything done or omitted to be done or suffered by the Trustee in good faith. Further, the Trustee is not liable for any action or omission that results in any depletion in the value of the trust fund and consequent losses of the Unitholder, except in situations where such depletion is a result of the gross negligence, fraud or wilful default on the part of the Trustee, or a violation of the Investment Management Agreement, as determined by a court of competent jurisdiction whose decision is final and non-appealable. Any costs and expenses incurred by the Trustee in connection with any legal proceedings, in relation to the Trust, shall be incurred by the Trustee from the Trust Assets.

The Investment Management Agreement provides that the Investment Manager is entitled to be indemnified out of the Trust Assets against all taxes and other liabilities, claims, costs, losses, damages and expenses (including reasonable attorney's fees and costs) ("**Losses**") incurred in connection with the Trust, unless arising out of fraud, gross negligence or wilful misconduct. As a result, the Trust's rights and the rights of the Unitholders to recover claims against the Investment Manager are limited. Further, recourse to the Trustee may be limited under the Indenture of Trust. The Indenture of Trust provides for the indemnification of the Trustee for all Losses, except Losses incurred due to any fraud, gross negligence or wilful misconduct, or material breach of the provisions of the Investment Management Agreement, or the provisions of the other Trust Documents, as finally determined by a court of competent jurisdiction.

51. *Information and the other rights of Unitholders under Indian law may differ from such rights available to equity shareholders of an Indian company or under the laws of other jurisdictions.*

The Indenture of Trust and various provisions of Indian law govern our corporate affairs. Legal principles relating to these matters and the validity of corporate procedures, fiduciary duties and liabilities, and Unitholders' rights may differ from those that would apply to a company in India or a trust in another jurisdiction. Unitholders' rights and disclosure standards under Indian law may also differ from the laws of other countries or jurisdictions. Also see "*Rights of Unitholders*" on page 306.

SECTION III – INTRODUCTION

SUMMARY FINANCIAL STATEMENTS

The following tables set forth the summary financial statements derived from:

A. (i) unaudited condensed interim consolidated financial statements of the Trust and the Project SPVs as of and for the nine-month period ended December 31, 2023; and (ii) audited consolidated financial statements of the Trust and the Project SPVs as of and for the Financial Years 2023, 2022 and 2021;

B. (i) unaudited condensed interim standalone financial statements of the Trust as of and for the nine-month period ended December 31, 2023; and (ii) audited standalone financial istatements of the Trust as of and for the Financial Years 2023, 2022 and 2021;

C. the consolidated financial statements of the Sponsor, prepared in accordance with Ind AS and the Companies Act, as of and for the Financial Years ended March 31, 2023, March 31, 2022 and March 31, 2021; and

D. the standalone financial statements of the Investment Manager, prepared in accordance with Ind AS and the Companies Act, as of and for the Financial Years ended March 31, 2023, March 31, 2022 and March 31, 2021.

The degree to which the summary financial statements included herein below will provide meaningful information is entirely dependent on the reader's level of familiarity with Indian accounting practices, Ind AS, the Companies Act and the InvIT Regulations. Accordingly, any reliance by persons not familiar with Indian accounting practices, Ind AS, the Companies Act and the InvIT Regulations on the summary financial statements presented below should be limited.

With respect to the Trust, the summary financial statements on a standalone and consolidated basis for the nine-month period ended December 31, 2023 is based on the independent auditors' review report on unaudited condensed interim financial statements and has been presented together with the audited financial statements for the Financial Years 2023, 2022 and 2021 for presentation purposes only.

The summary financial statements derived from the Consolidated Financial Statements, as presented herein below, should be read in conjunction with the Consolidated Financial Statements, the notes thereto and the sections "*Financial Statements*" and "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" on pages 333 and 666, respectively.

A. **Summary Consolidated Financial Statements**

I. ***Consolidated Balance Sheet as at December 31, 2023, March 31, 2023, March 31, 2022 and March 31, 2021***

(₹ in million)

	As at December 31, 2023 (Unaudited)	As at March 31, 2023 (Audited)	As at March 31, 2022 (Audited)	As at March 31, 2021 (Audited)
ASSETS				
Non-current assets				
Property, Plant and Equipment	6.87	7.59	8.85	10.59
Goodwill	604.54	604.54	604.54	604.54
Other Intangible assets	3,08,561.98	2,28,418.29	2,21,859.48	2,11,717.65
Intangible assets under development	6,218.25	2,421.67	1,290.89	4,684.26
Financial assets				
i) Others	32.06	0.33	2.74	3.28
Other non-current assets	8.00	174.07	656.55	0.14
Deferred tax assets (net)	1,280.76	755.80	287.67	-
	3,16,712.46	**2,32,382.29**	**2,24,710.72**	**2,17,020.47**
Current assets				
Financial assets				
i) Investments	7,095.52	1,283.09	659.54	572.50
ii) Trade receivables	213.05	84.67	51.55	100.24
iii) Cash and cash equivalents	687.54	731.31	287.23	413.49
iv) Bank balance other than (iii) above	9,453.30	4,866.69	2,469.97	1,744.35
v) Others	2,219.42	1,448.56	1,604.18	635.99
Current tax assets (net)	176.67	24.81	114.22	147.11
Other current assets	2,250.32	2,657.07	1,677.46	2,166.40
	22,095.82	**11,096.20**	**6,864.15**	**5,780.08**
Total assets	**3,38,808.28**	**2,43,478.49**	**2,31,574.87**	**2,22,800.55**
EQUITY AND LIABILITIES				
Equity				
Unit Capital	1,15,445.40	87,929.33	85,504.33	81,688.00
Subordinate Debt	16,916.65	-	-	-
Other equity				
Other reserves	(14,777.41)	(10,395.80)	(8,108.29)	(3,669.05)
Total Equity	**1,17,584.64**	**77,533.53**	**77,396.04**	**78,018.95**
Non-controlling interests	1.39	0.81	-	-
Total unit holder's Equity	**1,17,586.03**	**77,534.34**	**77,396.04**	**78,018.95**
Non-current liabilities				
Financial liabilities				
i) Borrowings	1,69,150.24	98,943.95	92,559.82	89,161.31
ii) Other financial liabilities	37,493.58	35,780.80	35,168.79	24,720.81
iii) Trade payables				

a) total outstanding dues of micro enterprises and small enterprises	-	-	-	-
b) total outstanding dues of creditors other than micro enterprises and small enterprises	-	4,165.72	5,998.85	2,463.41
Provisions	3,418.74	2,965.03	1,350.57	357.84
Deferred tax liabilities (net)	235.60	-	-	424.33
	2,10,298.16	**1,41,855.50**	**1,35,078.03**	**1,17,127.70**
Current liabilities				
Financial liabilities				
i) Borrowings	1,261.08	6,135.65	4,719.18	4,784.87
ii) Trade payables				
a) total outstanding dues of micro enterprises and small enterprises	1.50	1.61	3.69	13.18
b) total outstanding dues of creditors other than micro enterprises and small enterprises	7,945.74	15,303.87	11,214.65	2,547.07
iii) Other financial liabilities	1,623.92	2,549.37	3,023.13	20,198.86
Other current liabilities	91.85	98.15	140.15	109.78
Current tax liabilities (net)	-	-	-	0.14
	10,924.09	**24,088.65**	**19,100.80**	**27,653.90**
Total liabilities	**2,21,222.25**	**1,65,944.15**	**1,54,178.83**	**1,44,781.60**
Total equity and liabilities	**3,38,808.28**	**2,43,478.49**	**2,31,574.87**	**2,22,800.55**

II. ***Consolidated Statement of Profit and Loss for the nine-month period ended December 31, 2023, December 31, 2022 and the Financial Years 2023, 2022 and 2021***

(₹ in million)

Particulars	**For the nine months ended December 31, 2023 (Unaudited)**	**For the nine months ended December 31, 2022 (Unaudited)**	**For the year ended March 31, 2023 (Audited)**	**For the year ended March 31, 2022 (Audited)**	**For the year ended March 31, 2021 (Audited)**
Income					
Revenue from operations	26,535.36	19,896.67	26,912.59	12,404.84	10,361.51
Other income	527.86	161.32	263.08	100.13	112.71
Total income	**27,063.22**	**20,057.99**	**27,175.67**	**12,504.97**	**10,474.22**
Expenses					
Valuation Expenses	2.29	0.97	2.67	1.46	0.46
Audit Fees	3.68	3.85	5.04	3.13	3.88
Operating Expenses	13,201.29	9,305.29	12,865.52	2,029.53	2,157.13
Project Management Fees	2,931.62	1,997.38	2,647.70	1,960.27	1,826.28
Insurance and Security Expenses	66.74	8.13	14.72	1.12	11.43
Trustee Fees	4.54	3.33	5.95	4.16	3.41
Depreciation on Property, plant and Equipment	0.72	0.95	1.25	1.74	2.59
Amortisation of Intangible Assets	2,614.32	1,957.61	2,809.17	1,673.16	1,253.09
Finance costs (Interest)	9,531.37	6,698.66	9,005.28	8,670.13	8,046.33
Finance costs (Others)	814.76	990.24	1,249.41	868.58	181.84
Legal & Professional Fees	239.81	136.14	56.52	42.48	46.25
Investment Manager Fees	122.60	42.39	0.09	0.18	0.18
Custodian Fees	1.10	0.24	0.01	-	-
Fair value loss on measurement of other payable	1,676.37	356.63	560.53	2,161.31	-
Other expenses	63.25	86.20	256.29	235.06	118.97
Total expenses	**31,274.46**	**21,588.00**	**29,480.14**	**17,652.31**	**13,651.84**
Profit/(loss) before tax	**(4,211.24)**	**(1,530.02)**	**(2,304.47)**	**(5,147.34)**	**(3,177.62)**
Tax expenses					
Current tax	(75.08)	351.25	435.25	8.87	46.20
Deferred tax	(289.36)	(445.56)	(468.13)	(720.23)	369.63
MAT Credit utilisation / (Entitlement)	-	-	-	-	(340.97)
Total tax expenses	**(364.44)**	**(94.30)**	**(32.88)**	**(711.36)**	**74.86**
Profit/(loss) after tax	**(3,846.80)**	**(1,435.72)**	**(2,271.59)**	**(4,435.98)**	**(3,252.48)**
Other comprehensive income/(loss)					
Item that will not be reclassified to profit or loss:					
(a) Re-measurement (loss)/gain on defined benefit plans (net of taxes)	-	-	-	-	-
Other comprehensive (loss) for the year/ period, net of tax	-	-	-	-	-
Total comprehensive income/(loss) for the year/period	**(3,846.80)**	**(1,435.72)**	**(2,271.59)**	**(4,435.98)**	**(3,252.48)**

III. *Consolidated Cash Flow Statement for the nine-month period ended December 31, 2023, December 31, 2022 and the Financial Years 2023, 2022 and 2021*

(₹ in million)

Particulars	For the nine months ended December 31, 2023 (Unaudited)	For the nine months ended December 31, 2022 (Unaudited)	For the year ended March 31, 2023 (Audited)	For the year ended March 31, 2022 (Audited)	For the year ended March 31, 2021 (Audited)
Cash flow from operating activities					
Profit/(loss) before tax	(4,211.24)	(1,530.02)	(2,304.47)	(5,147.34)	(3,177.62)
Adjustment to reconcile loss before tax to net cash flows:					
Depreciation and amortisation	2,615.04	1,958.56	2,810.42	1,674.90	1,255.69
Resurfacing expenses	453.71	1,179.10	1,614.45	992.73	292.88
Fair value gain on mutual funds	(66.87)	(7.32)	(11.35)	(0.78)	(1.43)
Net (gain) on sale of current Investment	(77.82)	(42.12)	(62.95)	(13.93)	(13.08)
Finance costs	10,113.54	7,688.90	10,111.65	9,538.70	8,228.17
Interest income	(368.74)	(110.53)	(186.05)	(81.69)	(82.04)
Other non operative income	-	-	-	-	(13.28)
Gain/(loss) on fair value measurement of other payable	1,676.37	356.63	560.53	2,161.31	(2.86)
Operating profit before working capital changes	**10,133.99**	**9,493.19**	**12,532.23**	**9,123.91**	**6,486.41**
Movement in working capital:					
Increase/ (decrease) in trade payables	(11,873.19)	484.04	1,178.92	11,498.13	2,277.55
Increase/ (decrease) in other financial liabilities	(1,474.83)	(274.45)	435.72	306.46	(2,516.37)
(Decrease)/ increase in other liabilities	(58.75)	(438.94)	(45.01)	30.37	(52.75)
Decrease / (increase) in trade receivables	(128.38)	(0.10)	(33.12)	48.69	251.88
Increase in loans	-	-	-	-	(4.53)
(Increase) / decrease in other financial assets	(738.77)	496.71	134.16	(989.59)	(213.15)
(Increase) / decrease in other assets	2,313.69	420.27	(343.36)	(167.46)	1,232.51
Cash generated from operations	**(1,826.24)**	**10,180.73**	**13,859.54**	**19,850.51**	**7,461.55**
Taxes paid (net of refunds)	(71.71)	(179.49)	(345.84)	32.09	14.70
Net cash flows generated from operating activities(A)	**(1,897.95)**	**10,001.24**	**13,513.70**	**19,882.59**	**7,476.25**
Cash flows from investing activities					
Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development and capital advances	(86,554.59)	(7,745.84)	(11,055.81)	(17,617.12)	(18,933.90)
Proceeds from sale/ (purchase) of current investments (net)	(5,667.73)	(431.32)	(549.25)	(72.33)	(557.99)

Investments in bank deposits (having original maturity of more than three months) (net)	(4,586.61)	(1,987.42)	(2,396.72)	(725.62)	(167.95)
Interest received	305.66	129.08	200.12	103.63	75.08
Net cash flows (used in) investing activities(B)	**(96,503.27)**	**(10,035.50)**	**(13,801.66)**	**(18,311.44)**	**(19,584.76)**
Cash flows from financing activities					
Proceeds from non-current borrowings	119,742.76	31,668.76	32,302.27	3,988.29	9,204.86
Repayment of non-current borrowings	(48,312.74)	(25,772.63)	(25,923.75)	(775.43)	(39.62)
Proceeds/ (Repayment) of current borrowings (net)	-	-	-	-	4,155.57
Proceed of current borrowings	97.66	(267.50)	1,532.48	4,759.00	-
Repayment of current borrowings	(5,350.72)	1,532.48	(447.97)	(4,828.83)	-
Issue of Unit Capital	28,619.50	2,425.22	2,425.00	3,816.33	5,105.50
Return of Unit Capital	(1,103.43)	-	-	-	-
Issue of Subordinate Debt	16,916.65	-	-	-	-
Unit issue expenses	(85.13)	(15.33)	(15.33)	(3.26)	(103.82)
Finance cost paid	(9,725.17)	(7,575.83)	(9,140.79)	(8,653.52)	(5,990.16)
Transaction cost paid	(1,994.36)	-	-	-	-
Interest distribution to unitholders	(449.55)	-	-	-	-
Net cash flows generated from financing activities(C)	**98,355.47**	**1,995.17**	**731.91**	**(1,697.41)**	**12,332.32**
Net increase / (decrease) in cash and cash equivalents (A+B+C)	**(45.75)**	**1,960.90**	**443.95**	**(126.26)**	**223.81**
Cash and cash equivalents at the beginning of the year	**731.31**	**287.23**	**287.23**	**413.49**	**189.70**
Add: Cash acquired on transfer of SPV's/ Cash acquired during Business combination	1.98	-	0.13	-	-
Cash and cash equivalents at the end of the year/period	**687.54**	**2,248.13**	**731.31**	**287.23**	**413.49**
Components of cash and cash equivalents					
Balances with scheduled banks:					
- Trust, retention and other escrow accounts	375.57	1,833.69	394.06	161.56	113.94
- Others	214.72	279.80	279.37	118.03	288.60
- In deposit accounts with original maturity less than 3 months	80.00	124.50	49.50	-	-
Cash on hand	17.25	10.14	8.38	7.64	10.96
Total cash and cash equivalents	**687.54**	**2,248.13**	**731.31**	**287.23**	**413.49**
Debt reconciliation statement in accordance with Ind AS 7					
Opening balances					
Long term borrowing	101,369.82	94,124.22	94,124.22	90,833.34	78,815.63
Short term borrowing	5,350.72	4,085.74	4,085.74	4,155.57	-
Movements					
Cash Flows					
Long term borrowing	72,418.93	5,896.12	7,245.60	3,290.88	9,165.24

Short term borrowing	(5,253.06)	1,264.98	1,264.98	(69.83)	4,155.57
Non-cash changes					
Long term borrowing	-	-	-	-	2,852.47
Short term borrowing	-	-	-	-	-
Closing balances					
Long term borrowing	173,788.75	100,020.34	1,01,369.82	94,124.22	90,833.34
Short term borrowing	97.66	5,350.72	5,350.72	4,085.74	4,155.57

B. Summary Standalone Financial Statements

I. Standalone Balance Sheet as at December 31, 2023, March 31, 2023, March 31, 2022 and March 31, 2021

(₹ in million)

	As at December 31, 2023 (Unaudited)	As at March 31, 2023 (Audited)	As at March 31, 2022 (Audited)	As at March 31, 2021 (Audited)
ASSETS				
Non-current assets				
Financial assets				
i) Investments	44,794.18	94,424.44	90,929.80	88,050.31
ii) Loans	1,55,666.85	30,351.69	30,302.98	30,254.28
iii) Other financial assets	30.95	-	-	-
Total non-current assets	**2,00,491.98**	**1,24,776.13**	**1,21,232.78**	**1,18,304.59**
Current assets				
Financial assets				
i) Investments	5,737.32	20.08	20.04	50.00
ii) Cash and cash equivalents	28.55	6.56	0.25	12.65
iii) Bank Balance other than (ii) above	2,532.30	-	-	-
iv) Loans	7,327.61	5,421.29	3,492.95	1,810.28
v) Other financial assets	17,175.64	7,965.17	5,610.67	2,234.78
Current tax assets (net)	0.80	-	-	-
Other current assets	0.29	4.48	-	0.03
Total current assets	**32,802.51**	**13,417.58**	**9,123.92**	**4,107.74**
TOTAL ASSETS	**2,33,294.49**	**1,38,193.71**	**1,30,356.70**	**1,22,412.32**
EQUITY AND LIABILITIES				
Equity				
Unit capital	1,15,445.40	87,929.33	85,504.33	81,688.00
Other equity	17,674.36	9,526.42	5,992.74	4,020.25
Total unit holder's equity	**1,33,119.76**	**97,455.75**	**91,497.07**	**85,708.25**
Non-current liabilities				
Financial liabilities				
i) Borrowings	61,777.70	-	-	-
ii) Other financial liabilities	37,489.82	35,778.03	35,168.79	24,717.75
Total non- current liabilities	**99,267.52**	**35,778.03**	**35,168.79**	**24,717.75**
Current liabilities				
Financial liabilities				
i) Borrowings	802.00	4,872.91	3,607.93	3,677.76
ii) Trade payables				
a) total outstanding dues of micro enterprises and small enterprises	-	0.01	-	-
b) total outstanding dues of creditors other than micro enterprises and small enterprises	101.81	81.34	81.71	67.61
iii) Other financial liabilities	-	-	-	8239.25

Other Current liabilities	3.40	5.67	1.20	1.70
Total current liabilities	**907.21**	**4,959.93**	**3,690.84**	**11,986.32**
Total liabilities	**1,00,174.73**	**40,737.96**	**38,859.63**	**36,704.08**
TOTAL EQUITY AND LIABILITIES	**2,33,294.49**	**1,38,193.71**	**1,30,356.70**	**1,22,412.32**

II. Standalone Statement of Profit and Loss for the nine-month period ended December 31, 2023, December 31, 2022 and the Financial Years 2023, 2022 and 2021

(₹ in million)

	For the nine months ended December 31, 2023 (Unaudited)	**For the nine months ended December 31, 2022 (Unaudited)**	**For the year ended March 31, 2023 (Audited)**	**For the year ended March 31, 2022 (Audited)**	**For the year ended March 31, 2021 (Audited)**
Income					
Other income	11,589.71	3,177.76	4,222.87	4,200.44	4,203.30
TOTAL INCOME	**11,589.71**	**3,177.76**	**4,222.87**	**4,200.44**	**4,203.30**
Expenses					
Finance costs	1,108.60	-	-	-	-
Investment Manager Fees	122.60	42.39	56.52	42.48	46.25
Trustee fees	0.12	-	-	-	-
Valuation Fees	2.73	-	-	-	-
Other expenses	1,706.35	402.47	617.34	2,182.21	5.83
TOTAL EXPENSES	**2,940.40**	**444.86**	**673.86**	**2,224.69**	52.08
Profit / (Loss) before tax	**8,649.31**	**2,732.90**	**3,549.01**	**1,975.75**	**4,151.21**
Tax expenses	-	-	-	-	-
Profit / (Loss) after tax (A)	**8,649.31**	**2,732.90**	**3,549.01**	**1,975.75**	**4,151.21**
Other comprehensive income / (loss) for the year (net of tax)					
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)	-	-	-	-	-
Other comprehensive income/(loss) for the year (net of tax) (B)	-	-	-	-	-
Total comprehensive income for the year, net of tax : (A+B)	**8,649.31**	**2,732.90**	**3,549.01**	**1,975.75**	**4,151.21**

III. *Standalone Cash Flow Statement for the nine-month period ended December 31, 2023, December 31, 2022 and the Financial Years 2023, 2022 and 2021*

(₹ in million)

Particulars	For the nine months ended December 31, 2023 (Unaudited)	For the nine months ended December 31, 2022 (Unaudited)	For the year ended March 31, 2023 (Audited)	For the year ended March 31, 2022 (Audited)	For the year ended March 31, 2021 (Audited)
Cash flow from operating activities					
Profit / (Loss) before tax	8,649.31	2,732.90	3,549.01	1,975.75	4,151.21
Adjustments to reconcile profit before tax to net cash flows:					
Finance costs	1,108.60	-	-	-	-
Fair value gain on investments	(60.88)	(0.17)	(0.18)	-	-
Profit on sale of investments	(15.66)	(0.31)	(0.92)	(0.40)	(0.43)
Fair value loss on measurement of other payable	1,676.37	-	560.53	2,161.31	-
Interest income on					
- Fixed Deposits	(50.93)	-	-	-	-
- Others	(11,462.24)	(3,177.28)	(4,221.77)	(4,200.00)	(4,200.00)
Operating profit/(loss) before working capital changes	**(155.41)**	**(444.85)**	**(113.33)**	**(63.33)**	**(49.22)**
Movement in working capital:					
Increase/(decrease) in trade payables	20.46	(8.18)	(0.36)	14.10	40.48
Increase/(decrease) in other financial liabilities	35.42	393.32	48.71	50.48	(2,616.69)
Increase/(decrease) in other current liabilities	(2.28)	5.53	4.48	(0.50)	1.68
(Increase)/decrease in Other current assets	4.19	-	(4.48)	0.03	(0.03)
(Increase)/decrease in loans	(0.01)	(1,389.24)	(1,928.34)	(1,682.67)	28,019.39
(Increase)/decrease in Other Financial assets	(33.46)	(1,760.00)	(229.72)	(0.89)	(2,234.78)
Cash generated from/(used in) operations	**(131.09)**	**(3,203.42)**	**(2,223.05)**	**(1,682.80)**	**23,160.83**
Direct taxes paid (net of refunds)	(0.80)	-	-	-	-
Net cash flows from/(used in) operating activities (A)	**(131.89)**	**(3,203.42)**	**(2,223.05)**	**(1,682.80)**	**23,160.83**
Cash flows from investing activities					
Investment in subsidiaries	(7,155.00)	(1,212.00)	(1,212.00)	(615.00)	(1,205.00)
Investment in sub debt of subsidiaries	(25,915.31)	(2,282.64)	(2,282.64)	(2,264.49)	(34,724.37)
Repayment of sub debt from subsidiaries	4,511.07	-	-	-	-
Loan given to subsidiaries Long term	(48,907.48)	(36.70)	(48.71)	(48.71)	(48.71)
Loan repayment from subsidiaries Short term	816.74	-	-	-	-
Loan given to subsidiaries short term	(941.23)	-	-	-	-
Interest received from related parties	-	-	2,097.00	825.00	4,200.00
Purchase of units of Mutual Fund	(5,640.70)	(89.64)	(302.98)	(383.38)	(50.00)

Proceeds on sale of units of Mutual Fund	-	-	304.04	413.74	0.43
Investments in Bank deposits (having maturity of more than three months)	(2,532.30)	-	-	-	-
Interest received on fixed deposit	23.01	-	-	-	-
Interest received from related parties	2,282.20	3,177.28	-	-	-
Net cash flows from/(used in) investing activities (B)	**(83,459.01)**	**(443.70)**	**(1,445.29)**	**(2,072.84)**	**(31,827.64)**
Cash flow from financing activities					
Proceeds from issuance of unit capital	28,619.50	2,425.00	2,425.00	3,816.33	5,105.50
Return of unit capital	(1,103.43)	-	-	-	-
Proceeds from long term borrowings	63,677.20	-	-	-	-
Repayment of long term borrowings	(400.36)	-	-	-	-
Transaction cost on long term borrowings	(708.60)	-	-	-	-
Proceeds/repayments of current borrowings	-	1,264.98	1,532.48	4,266.50	3,677.76
Loan received from Sponsor	400.00	-	-	-	-
Loan repayment to Sponsor	(5,272.91)	-	-	-	-
Repayment of current borrowings	-	-	(267.50)	(4,336.33)	
Interest Distribution	(449.55)	-	-	-	-
Finance Cost paid	(1,097.14)	-	-	-	-
Unit Issue Expenses	(51.82)	(15.33)	(15.33)	(3.26)	(103.81)
Net cash flows from/(used in) financing activities (C)	**83,612.89**	**3,674.65**	**3,674.65**	**3,743.24**	**8,679.45**
Net increase/(decrease) in cash and cash equivalents (A+B+C)	**21.99**	**27.52**	**6.32**	**(12.40)**	**12.64**
Cash and cash equivalents at the beginning of the period	6.56	0.25	0.25	12.65	0.01
Cash and cash equivalents at the end of the period	**28.55**	**27.77**	**6.56**	**0.25**	**12.65**
Components of cash and cash equivalents					
Cash on hand	-	-	-	-	-
Balances with scheduled banks					
- On Current Account	28.55	27.77	6.56	0.25	12.65
Total Cash and cash equivalents	**28.55**	**27.77**	**6.56**	**0.25**	**12.65**
Debt reconciliation statement in accordance with Ind AS 7					
Opening balances as at beginning of the period					
Long term borrowings	-	-	-	-	-
Short term borrowings	4,872.91	3,607.93	3,607.93	3,677.76	-
Movements					
Long term borrowings	63,276.84	-	-	-	-
Short term borrowings	4,872.91	(1,264.98)	(1,264.98)	69.83	3,677.76

Closing balances as at end of the period					
Long term borrowings	63,276.84	-	-	-	-
Short term borrowings	-	4,872.91	4,872.91	3,607.93	3,677.76

C. **Summary Consolidated Financial Statements of the Sponsor**

I. ***Sponsor's summary consolidated balance sheet as at March 31, 2023, March 31, 2022 and March 31, 2021***

(₹ in million)

		March 31, 2023	March 31, 2022	March 31, 2021
I	**ASSETS**			
1	**Non-current assets**			
	Property, Plant and Equipment	9,348.85	9,458.46	1,377.31
	Capital work-in-progress	75.35	267.55	360.60
	Right-of-use asset	76.13	115.83	86.18
	Goodwill on consolidation	78.04	78.04	78.04
	Other Intangible assets	2,55,298.04	2,63,058.62	2,69,479.66
	Intangible assets under development	-	357.73	6,369.61
a.	Financial assets			
	i) Investments	49,452.35	44,407.24	44,866.61
	ii) Trade receivable	1,341.72	5,998.85	2,476.18
	iii) Loans	-	-	0.04
	iv) Other financial assets	41,701.12	49,322.13	31,002.45
b.	Deferred tax assets (net)	636.60	1.289.09	710.66
c.	Other non-current assets	2.58	38.10	29.44
		3,58,010.78	**3,74,391.64**	**3,56,836.78**
2	**Current assets**			
a.	Inventories	2,990.01	3,174.59	3,216.72
b.	Financial assets			
	i) Investments	1,956.99	4,634.98	3,122.58
	ii) Trade receivables	16,352.31	9,935.47	3,403.08
	iii) Cash and cash equivalents	3,005.60	529.75	6,534.85
	iv) Bank balance other than (iii) above	21,165.80	16,908.71	16,854.88
	v) Loans	6,176.03	4,179.61	4,248.34
	vi) Other financial assets	6,140.86	2,691.10	13,127.44
c.	Current tax assets (net)	122.57	816.61	767.03
d.	Other current assets	11,740.82	8,403.74	3,624.74
		69,650.99	**51,274.56**	**54,899.66**
	TOTAL ASSETS	**4,27,661.77**	**4,25,666.20**	**4,11,736.44**

	March 31, 2023	March 31, 2022	March 31, 2021
EQUITY AND LIABILITIES			
Equity			
Equity share capital	6,039.00	6,039.00	3,514.50
Other equity	1,27,749.99	1,19,617.41	65,493.19
	1,33,788.99	**1,25,656.41**	**69,007.69**
Liabilities			
Non-current liabilities			
Financial liabilities			

i)	Borrowings	1,42,476.99	1,54,747.17	1,70,524.14
ii)	Lease liabilities	45.49	85.06	43.17
iii)	Other financial liabilities	1,06,490.26	1,12,063.99	1,19,283.37
Provisions		537.52	520.43	421.55
Deferred tax liabilities (net)		1,273.83	853.71	24.06
Other non-current liabilities		3.88	2,965.63	-
		2,50,827.97	**2,71,235.99**	**2,90,296.29**
Current liabilities				
Financial liabilities				
i)	Borrowings	24,919.87	12,105.50	21,572.80
ii)	Trade payables			
	a) total outstanding dues of micro enterprises and small enterprises	419.20	514.59	777.59
	b) total outstanding dues of creditors other than micro enterprises	4,603.10	3,302.66	6,368.02
iii)	Lease liabilities	39.58	34.92	45.02
iv)	Other financial liabilities	8,367.53	10,717.31	17,427.32
Other current liabilities		4,637.45	1,824.80	5,681.09
Provisions		34.39	75.80	80.18
Current tax liabilities (net)		23.69	198.22	480.44
		43,044.81	**28,773.80**	**52,432.46**
Total liabilities		**2,93,872.78**	**3,00,009.79**	**3,42,728.75**
TOTAL EQUITY AND LIABILITIES		**4,27,661.77**	**4,25,666.20**	**4,11,736.44**

II. *Sponsor's summary consolidated statement of profit and loss for the Financial Years 2023, 2022 and 2021*

(₹ in million)

	March 31, 2023	March 31, 2022	March 31, 2021
Income			
Revenue from operations	64,016.41	58,037.00	52,986.30
Other income	3,016.73	5,517.47	1,889.00
TOTAL INCOME	**67,033.14**	**63,554.47**	**54,875.30**
Expenses			
Cost of material consumed	4,187.56	4,701.25	3,990.75
Road work and site expenses	20,767.30	19,083.84	17,627.90
Employee benefits expense	3,461.62	2,873.21	2,618.57
Finance costs	15,146.26	18,906.23	16,924.43
Depreciation and amortisation expenses	8,321.20	6,827.70	5,817.04
Other expenses	3,309.60	3,403.77	3,622.46
TOTAL EXPENSES	**55,193.54**	**55,796.00**	**50,601.15**
Profit before share of profit/(loss) from joint venture/ exceptional item and tax	**11,839.60**	**7,758.47**	**4,274.15**
Share of loss from joint ventures (net)	(1,070.09)	(2,262.15)	(1657.96)
Profit before exceptional items and tax	**10,769.51**	**5,496.32**	**2,616.19**
Exceptional item	-	-	-
Profit before tax	**10,769.51**	**5,496.32**	**2,616.19**
Tax expenses			
Current tax	2,500.18	1,781.97	1,862.39
Deferred tax	1,069.22	100.38	(417.69)
TOTAL TAX EXPENSES	**3,569.40**	**1,882.35**	**1,444.70**
Profit for the year	**7,200.11**	**3,613.97**	**1,171.49**
Other comprehensive income			
a) Mark to market gain/(loss) on fair value measurement of investments (net of tax)	1,682.60	244.74	2,775.59
b) Re-measurement loss on defined benefit plans (net of tax)	12.57	(22.31)	(10.93)
Other comprehensive income/(loss) for the year, net of tax	**1,695.17**	**222.43**	**2,764.66**
Total comprehensive income for the year, net of tax	**8,895.28**	**3,836.40**	**3,936.15**

III. *Sponsor's summary consolidated cash flows statement for the Financial Years 2023, 2022 and 2021*

(₹ in million)

		31-Mar-23	31-Mar-22	31-Mar-21
Cash flow from operating activities				
Profit before tax		**10,769.51**	**5,496.32**	**2,616.19**
Adjustments to reconcile profit before tax net cash flows:				
Depreciation and amortisation		8,321.20	6,827.69	5,817.04
Resurfacing expenses		228.26	57.74	86.87
Net loss/ (gain) on sale of property, plant and equipment		(125.19)	(11.52)	(4.35)
Fair value gain on mutual funds		(45.83)	(84.11)	(65.09)
Gain on fair value measurement of other receivables		(560.53)	(2,161.31)	(13.62)
Share of loss from joint ventures		1,070.09	2,262.15	1,657.96
Net (gain) on sale of current Investment		(124.74)	(73.67)	(43.31)
Loss on sale on non current Investment		18.76	-	-
Extinguishment of premium liability		-	(246.41)	(834.95)
Finance costs		15,146.26	18,906.23	16,924.43
Interest income		(2,037.60)	(2,940.39)	(1,590.40)
Other non operative income		-	(197.11)	(120.16)
Allowance for credit impaired		-	64.10	-
Operating profit before working capital changes		**32,660.19**	**27,899.71**	**24,430.61**
Movement in working capital:				
Increase/ (decrease) in trade payables		1,411.95	(3,326.86)	(294.67)
Increase/ (decrease) in provisions		(235.76)	168.73	6.64
Increase/ (decrease) in other financial liabilities		(590.78)	523.91	(3,164.78)
(Decrease)/ increase in other liabilities		1,296.10	(890.65)	(3,567.45)
Decrease / (increase) in trade receivables		(1,759.71)	(8,317.07)	(1,471.69)
Decrease / (increase) in inventories		184.58	42.13	96.83
(Increase) / decrease in loans		27.84	(1.06)	24.09
(Increase) / decrease in other financial assets		(8,864.78)	(5,744.63)	(5,458.72)
(Increase) / decrease in other assets		(4,468.69)	(4,750.14)	238.65
Cash (used for) / generated from operations		**19,660.94**	**5,604.07**	**10,839.51**
Taxes paid (net)		(2,019.64)	(1,962.94)	(2,171.47)
Net cash flows generated from / (used in) operating activities	**(A)**	**17,641.30**	**3,641.13**	**8,668.04**
Cash flows from investing activities				
Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development and capital advances		(3,814.07)	(11,422.77)	(77,780.00)
Proceeds from sale of property, plant and equipment		207.62	152.39	25.76
Purchase of property, plant and equipment		(494.89)	(2,473.04)	(153.04)
Proceeds/ redemption from sale of non-current investments		301.30	333.69	185.37
Consideration received on transfer of subsidiaries		3,418.19	-	1,792.36
Investment in joint venture		(4,663.03)	(1,946.33)	(2,603.81)
Loan given to joint ventures		(2,352.78)	(4,759.00)	(4,155.57)
Loan repaid by Joint Ventures		328.51	4,828.83	-
Other recoverable/advance towards subscription of units in joint venture		-	-	(2,544.40)

Receipt of other recoverable/advance towards subscription of units		-	-	3,413.14
Proceeds from sale/ (purchase) of current investments (net)		2,840.99	(1,354.61)	(2,886.19)
Investments in bank deposits (having original maturity of more than three months) (net)		(4,257.73)	(54.38)	1,423.56
Interest received		1,982.40	1,160.89	1,522.15
Net cash flows generated from investing activities	**(B)**	**(6,503.49)**	**(15,534.33)**	**(81,760.67)**
Cash flow from financing activities				
Proceeds from non-current borrowings		12,975.02	7,934.32	70,140.73
Proceeds from issue of non-convertible debentures		-	3,500.00	41,783.35
Repayments of non-convertible debentures		(1,058.74)	(16,210.00)	-
Repayment of non-current borrowings		(15,083.09)	(16,653.93)	(15,148.86)
Proceeds/ (Repayment) of current borrowings (net)		7,641.41	(8,901.29)	(4,842.85)
Proceeds from Issue of Equity Share Capital		-	52,866.92	-
Payment of lease liabilities		(45.55)	(43.38)	(49.68)
Finance cost paid		(12,279.21)	(16,606.99)	(14,926.64)
Dividend paid on equity shares		(754.88)	-	(1,757.25)
Net cash flows (used in) / generated from financing activities	**(C)**	**(8,605.04)**	**5,885.65**	**75,198.80**
Net increase/ (decrease) in cash and cash equivalents (A+B+C)		**2,532.77**	**(6,007.55)**	**2,106.17**
Cash and cash equivalents at the beginning of the year		472.83	6,480.38	4,374.21
Cash and cash equivalents at the end of the year		**3,005.60**	**472.83**	**6,480.38**

Components of cash and cash equivalents			
Balances with scheduled banks:			
- Trust, retention and other escrow accounts	144.25	68.09	54.01
- Current accounts	2,311.87	246.46	5,613.11
- In deposit accounts with original maturity less than 3 months	439.16	100.78	732.97
Cash on hand	110.32	114.42	134.76
Less : Book overdraft	-	(56.92)	(54.47)
Total Cash and cash equivalents	**3,005.60**	**472.83**	**6,480.38**

D. Summary Standalone Financial Statements of the Investment Manager

I. *Investment Manager's Summary Balance Sheet as at March 31, 2023, March 31, 2022 and March 31, 2021*

(₹ in million)

			March 31, 2023	March 31, 2022	March 31, 2021
I	**ASSETS**				
(1)	**Non-current assets**				
a.	Property, plant and Equipment		0.38	-	-
b.	Financial assets				
	i)	Investments	0.10	0.10	0.10
	ii)	Loans	-	-	0.07
			0.48	**0.10**	**0.17**
(2)	**Current assets**				
a.	Financial assets				
	i)	Investments	5.10	4.01	-
	ii)	Trade Receivables	78.54	81.70	96.90
	iii)	Cash and cash equivalents	5.39	17.18	10.84
	iv)	Bank balance other than (iii) above	10.00	-	-
	v)	Other financial assets	0.01	0.12	0.11
b.	Current tax assets (net)		4.84	12.69	8.46
c.	Other current assets		0.01	-	0.63
			103.89	**115.71**	**116.94**
	TOTAL ASSETS		**104.36**	**115.81**	**117.11**
II	**EQUITY AND LIABILITIES**				
	Equity				
a.	Equity share capital		70.00	70.00	70.00
b.	Other equity		19.47	32.68	32.28
			89.47	**102.68**	**102.28**
	Liabilities				
(1)	**Non-current liabilities**				
	Provisions		8.01	2.71	2.37
			8.01	**2.71**	**2.37**
(2)	**Current liabilities**				
a.	Financial liabilities				
	i)	Trade payables			
		a) total outstanding dues of micro enterprises and small enterprises	-	-	-
		b) total outstanding dues of creditors other than micro enterprises	0.11	0.90	0.12
	ii)	Other financial liabilities	3.52	5.27	5.64
b.	Other current liabilities		2.44	4.12	6.58
c.	Provisions		0.81	0.13	0.12
			6.88	**10.42**	**12.46**
	Total liabilities		**14.89**	**13.13**	**14.83**
	TOTAL EQUITY AND LIABILITIES		**104.36**	**115.81**	**117.11**

II. ***Investment Manager's Summary Statement of Profit and Loss for the the Financial Years 2023, 2022 and 2021***

(₹ in million)

	March 31, 2023	March 31, 2022	March 31, 2021
Income			
Revenue from operations	47.90	36.00	35.09
Other income	1.13	0.49	2.40
TOTAL INCOME	**49.03**	**36.49**	**37.49**
Expenses			
Employee benefits expense	53.61	28.50	29.58
Other expenses	6.35	7.42	5.61
TOTAL EXPENSES	**59.96**	**35.92**	**35.19**
Profit before tax	**(10.93)**	**0.57**	**2.30**
Tax expenses			
Current tax	2.42	0.20	0.70
TOTAL TAX EXPENSES	**2.42**	**0.20**	**0.70**
Profit for the year	**(13.35)**	**0.37**	**1.60**
Other comprehensive income			
Item that will not to be reclassified to profit or loss:			
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)	0.14	0.03	0.11
Other comprehensive income/(loss) for the year (net of taxes)	**0.14**	**0.03**	**0.11**
Total comprehensive income for the year	**(13.21)**	**0.40**	**1.71**

III. *Investment Manager's Summary Cash Flow Statement for the Financial Years 2023, 2022 and 2021*

(₹ in million)

		March 31, 2023	March 31, 2022	March 31, 2021
Cash flow from operating activities				
Profit before tax		**(10.93)**	**0.57**	**2.30**
Adjustments to reconcile profit before tax net cash flows:				
Re-measurement gains on defined benefit plans (net of taxes)		0.14	-	-
Fair Value Gain on Mutual Funds		(0.10)	(0.01)	-
(Gain) / Loss on sale of investment		-	(0.10)	(0.10)
Interest income on				
- Bank deposits		(0.56)	(0.35)	(1.37)
- Others		(0.43)	(0.03)	(0.05)
Operating profit before working capital changes		**(11.88)**	**0.08**	**0.77**
Working capital adjustments				
Decrease/(increase) in loans		-	0.07	2.27
Decrease/(increase) in trade receivables		3.16	15.20	(96.90)
Decrease/(increase) in others financial assets		0.10	0.01	26.92
Increase/(decrease) in provisions		5.98	0.38	0.10
Decrease /(Increase) in trade payables		(0.79)	0.78	(7.71)
Decrease/(increase) in other assets		(0.01)	0.63	0.16
Increase/(Decrease) in other financial liabilities		(1.75)	(0.37)	2.71
(Decrease)/Increase in other liabilities		(1.69)	(2.46)	5.21
Cash (used for) / generated from operations		**(6.87)**	**14.32**	**(66.46)**
Taxes paid (net)		5.43	(4.44)	(5.55)
Net cash flows generated from / (used in) operating activities	**(A)**	**(1.44)**	**9.88**	**(72.01)**
Cash flows from investing activities				
Purchase of Property, plant and equipment including CWIP		(0.38)	-	-
Intangible Assets includes Intangible Assets under Development & Capital Advance		-	-	-
Proceeds from sale/(purchase) of current investments		(0.98)	(3.91)	0.10
Bank deposits placed (having original maturity of more than three months)		(10.00)	-	-
Interest received		1.01	0.37	1.41
Dividend received from subsidiary companies		-	-	-
Net cash flows generated from investing activities	**(B)**	**(10.35)**	**(3.54)**	**1.51**
Cash flow from financing activities				
Equity dividend paid		-	-	-
Repayment of current borrowings		-	-	-
Net cash flows (used in) / generated from financing activities	**(C)**	**-**	**-**	**-**
Net increase/ (decrease) in cash and cash equivalents (A+B+C)		**(11.79)**	**6.34**	**(70.50)**
Cash and cash equivalents at the beginning of the year		17.18	10.84	81.34
Cash and cash equivalents at the end of the year		**5.39**	**17.18**	**10.84**
Components of cash and cash equivalents				
Cash on hand		0.00	0.00	0.00
Balances with scheduled banks:				
- In current accounts		0.39	2.02	0.84
- Original maturity less than 3 months		5.00	15.16	10.00
Total Cash and cash equivalents		**5.39**	**17.18**	**10.84**

THE ISSUE

The Issue is a rights issue under the InvIT Regulations. The Issue has been authorized by a resolution of the board of directors of the Investment Manager dated March 5, 2024.

The following table summarizes the details of the Issue:

Issue	Up to 92,000,000 Units aggregating up to ₹22,527.00 million
Rights Entitlements	One Unit for every 11.11 Units held on the Record Date*
Allotment Lot	200,000 Units
Trading Lot	200,000 Units
Record Date	March 12, 2024
Issue Price	₹244.86 per Unit**
Terms of Payment	See "*Issue Procedure*" on page 721
Issue Proceeds	See "*Objects of the Issue*" on page 69
Designated Stock Exchange	NSE
Timeline for Listing	The Units issued in the Issue will be listed within six Working Days from the Issue Closing Date, or such other timeline as may be specified under applicable law
Details of outstanding Units	
Units outstanding prior to the Issue	1,021,693,265 Units
Units outstanding after the Issue	1,113,093,265 Units***

**The Rights Entitlement Ratio is one Unit for every 11.1053615760870 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*

***The Issue Price is ₹244.8586956. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*

****Assuming full subscription in the Issue.*

Pursuant to a letter dated January 23, 2024, the SEBI granted certain exemptions to the Trust from compliance with certain provisions of Chapter 9 of the SEBI Master Circular, pursuant to which the Trust is eligible to undertake the Issue as a rights issue on a fast-track basis.

The Trust has received in-principle approval from the NSE for the listing of the Units to be allotted pursuant to the Issue through its letter dated March 13, 2024. The Investment Manager (on behalf of the Trust) will also make an application to the Stock Exchange to obtain trading approval for the Rights Entitlements.

The Units will be allotted and traded only in dematerialized form, in accordance with the InvIT Regulations and the SEBI Master Circular. There shall not be multiple classes of Units of the Trust, unless permitted by applicable law.

No person connected with the Issue, including any person connected with the distribution of the Issue, shall offer any incentive, whether direct or indirect, in any manner, whether in cash or kind or services or otherwise to any person for making an application for Allotment of the Units.

GENERAL INFORMATION

The Trust has been settled by the Sponsor as an irrevocable trust under the provisions of the Trusts Act in New Delhi, India pursuant to the Indenture of Trust dated August 27, 2019, as amended. The Indenture of Trust is registered under the Registration Act. The Trust is registered with the SEBI as an infrastructure investment trust under the InvIT Regulations. The Units of the Trust are listed on the NSE.

For details of the business of the Trust, see "*Business*" on page 124.

Principal place of business and correspondence address of the Trust:

IRB Infrastructure Trust
Off No-11th Floor/1101
Hiranandani Knowledge Park
Technology Street, Hill Side Avenue
Powai, Mumbai 400 076
Maharashtra, India
Tel: +91 22 6733 6400
E-mail: irbinfrastructuretrust@irb.co.in
Website: https://www.irbinfratrust.co.in/
SEBI registration number: IN/InvIT/19-20/0012
Date of registration with the SEBI: November 25, 2019

Contact Person and Compliance Officer

Mr. Kaustubh Shevade has been designated by the Investment Manager as the Compliance Officer with respect to the Trust and is the relevant contact person with respect to the Trust. His contact details are as follows:

Mr. Kaustubh Shevade
MMK Toll Road Private Limited
Off No-11th Floor/1101
Hiranandani Knowledge Park
Technology Street, Hill Side Avenue
Powai, Mumbai 400 076
Maharashtra, India
Tel: +91 22 6733 6400
E-mail: kaustubh.shevade@irb.co.in

Applicants can contact the Compliance Officer, the Registrar or the Lead Manager in case of any pre-Issue or post-Issue related problems such as non-credit of Rights Entitlements or Allotted Units in the respective beneficiary account and non-receipt of refunds.

Sponsor/Project Manager

IRB Infrastructure Developers Limited
Off No-11th Floor/1101
Hiranandani Knowledge Park
Technology Street, Hill Side Avenue
Powai, Mumbai 400 076
Maharashtra, India
Tel: +91 22 6640 4220
Email: info@irb.co.in
Contact person: Mr. Mehul Patel

Trustee

IDBI Trusteeship Services Limited
Ground Floor, Universal Insurance Building
Sir Phirozshah Mehta Road, Fort
Mumbai 400 001

Maharashtra, India
Tel: +91 22 4080 7000
Fax: +91 22 6631 1776
E-mail: itsl@idbitrustee.co.in
SEBI registration number: IND000000460
Contact person: Ms. Sheetal Mehta / Mr. Munjal G. Dhanani

Investment Manager

MMK Toll Road Private Limited
Off No-11th Floor/1101
Hiranandani Knowledge Park
Technology Street, Hill Side Avenue
Powai, Mumbai 400 076
Maharashtra, India
Tel: +91 22 6733 6400
Email: dhananjay.joshi@irb.co.in
Contact person: Mr. Dhananjay Joshi

Lead Manager

Vivro Financial Services Private Limited
607/608 Marathon Icon, Opp. Peninsula Corporate Park
Off. Ganpatrao Kadam Marg
Veer Santaji Lane, Lower Parel
Mumbai 400 013, Maharashtra, India
Tel: +91 22 6666 8040
Email: investors@vivro.net
Investor grievance email: investors@vivro.net
Website: www.vivro.net
Contact Person: Viral Shah
SEBI registration number: INM000010122
CIN: U67120GJ1996PTC029182

Advisors to the Sponsor for the Issue

Avener Capital Private Limited
ONE BKC, 1312, C Wing, 13th Floor
Plot No. C 66, G Block, Bandra-Kurla Complex
Bandra East, Mumbai 400 051
Maharashtra, India

Legal Advisors for the Issue as to Indian law

S&R Associates
One World Center, 1403, Tower 2 B
841 Senapati Bapat Marg, Lower Parel
Mumbai 400 013
Maharashtra, India

Joint Statutory Auditors

Gokhale & Sathe, Chartered Accountants
Unit No. 304/308/309
Udyog Mandir No. 1
7-C, Bhagoji Keer Marg, Mahim
Mumbai 400 016
Maharashtra, India
Tel: +91 22 4348 4242
E-mail: kaustubh@gokhalesathe.in

M S K A & Associates, Chartered Accountants
602, Floor 6, Raheja Titanium, Western Express Highway, Geetanjali Railway Colony
Ram Nagar, Goregaon (E)
Mumbai 400 063
Maharashtra, India
Tel: +91 22 6238 0519
E-mail: nitintiwari@mska.in

Firm registration number: 103264W	**Firm registration number**: 105047W
Peer Review Certificate number: 016321	**Peer Review Certificate number**: 013267

Valuer for the TOT-12 and TOT-13 Valuation Reports and the Portfolio Valuation Report

KPMG Valuation Services LLP
IBBI Registration No. IBBI/RV-E/06/2020/115
2nd Floor, Block T2 (B Wing), Lodha Excelus
Apollo Mills Compounds, N M Joshi Marg
Mahalaxmi, Mumbai 400 011, Maharashtra, India
Tel: + 91 22 3989 6000
E-mail: amitsjain@kpmg.com
Contact Person: Amit Jain

Registrar to the Issue

KFin Technologies Limited
Selenium Tower-B, Plot No. 31 &32
Gachibowli, Financial District
Nanakramguda, Serilingampally
Hyderabad 500 032, Telangana, India
Tel: +91 40 6716 2222/1800 309 4001
Fax: +91 40 6716 1563
Email: irb.rights@kfintech.com
SEBI registration number: INR000000221
Contact person: M. Murali Krishna
Website: www.kfintech.com
Investor Grievance Email: einward.ris@kfintech.com
CIN: L72400TG2017PLC117649

Escrow Collection Bank

Canara Bank
14th Floor, E wing, Market Tower,
Cuffe Parade
Mumbai 400 005
Maharashtra, India
Contact person: Neelu Shukla (Chief Manager)
Tel: 022 2215 6011
E-mail: cb2630@canarabank.com
Website: www.canarabank.com
SEBI registration number: INB100000019

Credit Rating

Certain of our proposed long term loan facilities have received a provisional 'CRISIL AAA/stable' credit rating from CRISIL Ratings on October 16, 2023.

Underwriting

The Issue is not proposed to be underwritten.

Responsibilities of the Lead Manager

S. No.	Activity	Responsibility
1.	Capital structuring with the relative components and formalities such type of instrument, number of instruments to be issued, etc.	Lead Manager
2.	Coordination for drafting and design of the Letter of Offer in accordance with the InvIT Regulations and other stipulated	Lead Manager

S. No.	Activity	Responsibility
	requirements and completion of prescribed formalities with the Stock Exchange and SEBI	
3.	Drafting, design and distribution of the Application Form and Rights Entitlement Letter	Lead Manager
4.	Selection of various agencies connected with Issue, such as Registrars to the Issue and printers	Lead Manager
5.	Drafting and approval of all statutory advertisements	Lead Manager
6.	Selection of various agencies connected with Issue, such as Banker(s) to the Issue etc., as may be applicable and co-ordination of the respective agreements	Lead Manager
7.	Drafting and approval of all publicity material including corporate advertisement, brochure, corporate films, etc., (if applicable)	Lead Manager
8.	Drafting and design of management/investor presentation (if applicable)	Lead Manager
9.	Formulating and coordination of international marketing strategy (if applicable)	Lead Manager
10.	Formulation and coordination of domestic institutional marketing strategy (if applicable)	Lead Manager
11.	Co-ordination with stock exchanges and formalities for use of online software, bidding terminal, mock trading, etc. including any stock exchange deposit	Lead Manager
12.	Non-institutional and retail marketing of the Issue, if applicable, which will cover, *inter-alia*: • Formulating marketing strategies; • Finalizing collection centres; and • Follow-up on distribution of publicity and Issue material including Application Form, Letter of Offer	Lead Manager
13.	Post-Issue activities, which shall involve essential follow-up steps including follow-up with escrow banks and advising the Investment Manager about the closure of the Issue, based on correct figures, finalization of the basis of allotment or weeding out of multiple applications, listing of instruments, dispatch of certificates or demat credit and refunds and coordination with various agencies connected with the post-Issue activity such as Registrar to the Issue etc. and coordination of underwriting arrangement, if any, and release of security deposit, if any	Lead Manager

OBJECTS OF THE ISSUE

This Issue comprises a fresh issue of up to 92,000,000 Units aggregating up to ₹22,527.00 million on a rights basis to Eligible Unitholders.

The Trustee and the Investment Manager shall ensure that the subscription amounts are kept in a separate bank account in the name of the Trust until the listing of the Units pursuant to the Issue and are only utilized for adjustment against Allotment of Units or refund of money to Eligible Unitholders.

In accordance with the InvIT Regulations, the Investment Manager (on behalf of the Trust) intends to utilize the Issue Proceeds towards the objects set out below.

Issue Proceeds

The details of the Issue Proceeds are set forth in the following table:

(₹ in million)

Particulars	Amount*
Gross proceeds from the Fresh Issue	22,527.00
Issue Proceeds	**22,527.00**

**Assuming full subscription in this Issue*

Utilization of Issue Proceeds

The proposed utilisation of the Issue Proceeds is set forth in the table below:

(₹ in million)

S. No.	Particulars	Amount*
1.	Investment in IRB LTPL through subscription to equity shares	4,205.30
2.	Providing loans to IRB LTPL towards funding of the total project cost	1,2617.40
3.	Investment in IRB GTPL through subscription to equity shares	1,032.35
4.	Providing loans to IRB GTPL towards funding of the total project cost	3,098.55
5.	Investment in IRB KTPL through subscription to equity shares	392.975
6.	Providing loans to IRB KTPL towards funding of the total project cost	1,180.425
Issue Proceeds		**22,527.00**

**Assuming full subscription in this Issue*

The fund requirements mentioned above and the proposed deployment are based on the estimates of the Investment Manager and have not been appraised by any bank, financial institution or any other external agency. The Issue Proceeds will be utilized in accordance with applicable law.

Details of Utilization of Issue Proceeds

The details of utilization of the Issue Proceeds are set forth herein below:

I. *Investment in IRB LTPL through subscription to equity shares*

The Investment Manager, on behalf of the Trust, proposes to utilize an estimated amount of ₹4,205.30 million from the Issue Proceeds to subscribe to 420,530,000 equity shares of IRB LTPL ("**IRB LTPL Subscription Shares**"). The Trustee (on behalf of the Trust), the Investment Manager and IRB LTPL have entered into the IRB LTPL Share Subscription Agreement for subscribing to the IRB LTPL Subscription Shares for a total consideration of ₹4,205.30 million. Certain other agreements are have also been entered into in connection with the investment by the Trust in IRB LTPL. For details of such agreements see "*Background and Structure of the Trust – Investment in IRB LTPL, IRB GTPL and IRB KTPL*" on page 103.

Also see "*Risk Factors – We are in the process of infusing further capital in IRB LTPL, IRB GTPL and IRB KTPL (pursuant to definitive agreements), which if not completed in a timely manner or at all, may adversely affect us*" on page 22.

Key terms of the IRB LTPL Share Subscription Agreement are set out below.

<u>*IRB LTPL Share Subscription Agreement*</u>

Certain definitions

"**Closing Date**" shall mean the date of completion of the actions set out in the IRB LTPL Share Subscription Agreement. Closing shall occur within five days from the date of allotment in the Issue.

"**Governmental Authority**" includes the SEBI, the NHAI, the Ministry of Road Transport and Highways of the Government of India or any state or union territory of India, the Reserve Bank of India, and any national, state, regional or local government or governmental, regulatory, statutory, administrative, fiscal, taxation, judicial, or government-owned body, department, commission, authority, court, arbitrator, tribunal, agency or entity, in India or outside India, in each case, having jurisdiction over any of the parties, their operations, or the transactions contemplated in the IRB LTPL Share Subscription Agreement and the IRB LTPL transaction documents.

"**IRB LTPL Material Adverse Change**" shall mean any fact, circumstance, or condition that, individually or in the aggregate, has a material adverse effect on or material adverse change in: (i) the business, assets (whether tangible or intangible), liabilities, financial condition or regulatory status of IRB LTPL; or (ii) the ability of IRB LTPL to perform its obligations under any IRB LTPL transaction document, or to complete any of the transactions contemplated thereunder; or (iii) the validity, legality or enforceability of the rights or remedies of the Trust or the Investment Manager under the IRB LTPL Share Subscription Agreement.

"**Subscription Price**" shall mean the price of ₹10 per IRB LTPL Subscription Share.

Issuance and subscription to the IRB LTPL Subscription Shares

Subject to the terms and conditions of the IRB LTPL Share Subscription Agreement, IRB LTPL has agreed to issue the IRB LTPL Subscription Shares to the Trust, and the Trust has agreed to subscribe to all the IRB LTPL Subscription Shares, free and clear from all encumbrances, together with all rights, title, interest and benefits appertaining thereto, on the Closing Date, at the Subscription Price per IRB LTPL Subscription Share.

The Trust shall ensure that such number of the IRB LTPL Subscription Shares aggregating to not more than 51% of the total equity share capital of IRB LTPL are pledged with the relevant lenders of IRB LTPL within a specified timeline from the Closing Date in accordance with the financing documents of IRB LTPL.

IRB LTPL is also required to complete the necessary form filings with the Registrar of Companies, Maharashtra in relation to the actions contemplated under the IRB LTPL Share Subscription Agreement post-closing. Further, IRB LTPL is also required to provide a valuation report to the Trust for tax purposes in relation to the fair market value of the IRB LTPL Subscription Shares.

The Trust has undertaken to ensure that the proceeds of the share subscription are utilized solely for funding of the total project cost of IRB LTPL's project and that the concession fee is paid to the relevant concessioning authority by IRB LTPL, failing which the parties have agreed to certain arrangements in relation to dealing with the proceeds of the share subscription.

Conditions Precedent

The obligations of the parties to complete the transaction under the IRB LTPL Share Subscription Agreement is subject to the fulfilment of certain conditions by IRB LTPL on or before the Closing Date, to the satisfaction of the Trust, unless waived or deferred in writing by the Trust at its sole discretion, which, *inter-alia*, include:

- no Governmental Authority of competent jurisdiction shall have enacted, issued, promulgated or enforced any applicable law that prohibits or makes illegal the consummation of the transactions contemplated under any of the IRB LTPL transaction documents;
- there shall be no legal proceeding pending against, or threatened against IRB LTPL wherein an unfavorable judgment, decree, injunction or order could reasonably result in any of the transactions contemplated herein being declared unlawful or rescinded, and no such judgment, decree, injunction or order shall be in effect;
- the IRB LTPL business plan and the IRB LTPL annual budget shall be in agreed form;
- the representations and warranties provided by IRB LTPL under the IRB LTPL Share Subscription Agreement shall be true, complete and accurate in all respects as of the date of execution of the IRB LTPL

Share Subscription Agreement and as of the Closing Date (except those representations and warranties that address matters only as of a specified date, which shall be true, complete and accurate in all respects as of that specified date);

- IRB LTPL shall have obtained all necessary consents in connection with the execution of the IRB LTPL Share Subscription Agreement, the IRB LTPL transaction documents and the completion of the transactions contemplated thereunder;
- no IRB LTPL Material Adverse Change shall be subsisting as on the Closing Date.
- IRB LTPL shall have duly performed and complied in all respects with all agreements, covenants and conditions required by the IRB LTPL transaction documents to be performed or complied with by them prior to or on the Closing Date;
- IRB LTPL shall have passed: (a) resolutions of its board of directors at a validly convened meeting of the board of directors authorizing the issuance and allotment of the IRB LTPL Subscription Shares to the Trust, on a private placement basis, subject to the approval of IRB LTPL's shareholders; and (b) special resolutions of the shareholders of IRB LTPL at a validly convened general meeting of IRB LTPL approving the issue and allotment of the IRB LTPL Subscription Shares to the Trust, on a private placement basis, each in accordance with the Companies Act, and certified copies of such resolutions shall have been delivered to the Investment Manager (on behalf of the Trust);
- IRB LTPL shall have issued a private placement offer letter in the form prescribed under the Companies Act to the Trust in relation to the issuance of the IRB LTPL Subscription Shares and shall have recorded the names of the Trust in the form prescribed under the Companies Act;
- IRB LTPL shall have completed the filing with the Registrar of Companies, Maharashtra of the Forms MGT-14 in relation to the board resolutions and shareholders' resolutions;
- IRB LTPL shall have obtained a valuation report from a registered valuer appointed in accordance with Section 247 of the Companies Act;
- IRB LTPL shall have opened a separate bank account to receive the Subscription Amount as required in accordance with Section 42 of the Companies Act and shall have provided necessary details relating to such account to the Trust;
- there shall not have been any restriction or any threatened restriction, under applicable law which: (i) involves a challenge to or seeks to or prohibits, prevents, restrains, restricts, delays, makes illegal or otherwise interferes with the consummation of any of the transactions contemplated under the IRB LTPL Share Subscription Agreement, or impairs or prejudices the due, proper and irrevocable consummation of the transactions contemplated under the IRB LTPL Share Subscription Agreement, or (ii) seeks to impose conditions upon the ownership or operations of IRB LTPL or which affects the ability of the Trust to invest in IRB LTPL as contemplated under the IRB LTPL Share Subscription Agreement; and
- the Trust shall have received a certificate (along with all the supporting documents), dated the Closing Date and signed by a duly authorized officer of IRB LTPL, that each of the conditions set forth above have been satisfied.

Representations and Warranties

IRB LTPL, the Investment Manager and the Trust (acting through the Trustee) have provided representations and warranties in relation to, *inter-alia*, their incorporation, existence, authority to enter into the agreement, eligibility to undertake the transactions under the agreement and no conflicts.

IRB LTPL has represented that, from the date of the IRB LTPL Share Subscription Agreement until the Closing Date, its business will be conducted in the ordinary course and in accordance with applicable laws and the other transaction documents.

The Trust and IRB LTPL have agreed and acknowledged that IRB and its affiliates can continue to include IRB LTPL and its project as part of their experience and eligibility in any bids for infrastructure projects submitted by IRB or its affiliates in the future even after the Closing Date, subject to the conditions set out in the IRB LTPL Share Subscription Agreement.

Governing Law, Dispute Resolution and Termination

The IRB LTPL Share Subscription Agreement is governed by the laws of India. Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre ("**SIAC**") in accordance with the Arbitration Rules of the Singapore International Arbitration Centre ("**SIAC Rules**") for the time being in force. The arbitration panel will consist of three arbitrators, each of which will be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings will be Delhi, India.

The IRB LTPL Share Subscription Agreement may be terminated prior to the Closing Date: (i) by the mutual written agreement of the parties; (ii) upon termination of the Framework Agreement; or (iii) by the Trust or IRB LTPL, if closing has not occurred by the long stop date (six months from the date of the IRB LTPL Share Subscription Agreement).

II. *Providing loans to IRB LTPL towards funding of the total project cost*

The Investment Manager, on behalf of the Trust, proposes to utilize an estimated amount of ₹12,617.40 million from the Issue Proceeds to provide unsecured loans to IRB LTPL under the IRB LTPL Shareholder Loan Agreement. IRB LTPL in turn intends to utilize the proceeds of such financing towards funding of the total cost of its project.

Also see "*Risk Factors – We are in the process of infusing further capital in IRB LTPL, IRB GTPL and IRB KTPL (pursuant to definitive agreements), which if not completed in a timely manner or at all, may adversely affect us*" on page 22.

Key terms of the IRB LTPL Shareholder Loan Agreement are set out below.

Purpose	IRB LTPL shall utilize the loan amounts solely for funding of the total project cost of IRB LTPL. Any loan amounts disbursed to IRB LTPL out of the Issue Proceeds shall be utilized solely for such purpose.
Term	IRB LTPL shall repay the loan at the end of the concession period under the relevant concession agreement or as mutually agreed between the parties to the Shareholder Loan Agreement.
Interest	• IRB LTPL shall pay accrued interest (subject to withholding of applicable taxes) at the rate of 16% p.a., or or such other rate as may be decided mutually by the parties to the IRB LTPL Shareholder Loan Agreement from time to time. • Interest will accrue and be chargeable from the appointed date under the concession agreement. • Interest will be payable when able following the appointed date in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter, provided that IRB LTPL, may, at its discretion, elect to pay interest on a monthly basis, and such interest shall be payable on the first day of the subsequent month for which the interest is being paid.
Repayment	• The Trust may call on IRB LTPL to prepay the loan, in full or part, or permit IRB LTPL to make payments of the outstanding loan, in full or part, after the date such payment is due, at any time during the term of the IRB LTPL Shareholder Loan Agreement until the final settlement date (as defined in the IRB LTPL Shareholder Loan Agreement). • IRB LTPL may prepay the whole or part of the loan together with interest on that amount accrued up to the date of prepayment, by giving a prior written notice of not less than 30 days to the Trust, specifying the amount to be prepaid and the date of proposed prepayment. • The loan (in one or more tranches) provided under the IRB LTPL Shareholder Loan Agreement shall, at all times be subordinate to the debt provided by the senior lenders. Subject to the terms of the financing agreements and the escrow agreements, payments towards the loan amounts (including interest) shall be made out of balance available in the escrow account for utilization in accordance with the instructions of IRB LTPL on the relevant interest payment date or repayment date, after meeting all payments due to the senior lenders as of such date.
Security	Unsecured
Events of Default	The occurrence of any of the events or circumstances set out below shall constitute an "**Event of Default**", if not remedied within 180 days (or such extended period as may be provided by the Trust at its sole discretion) from the date of receiving notice of such default from the Trust. IRB LTPL shall promptly give written notice to the Trust of any Event of Default and of any other event which, with the giving of notice or lapse of time or otherwise could constitute an Event of Default, and inform the Trust of any action taken or proposed to be taken by IRB LTPL in connection therewith.

	• **Non-Payment:** IRB LTPL fails to pay any amount due under the IRB LTPL Shareholder Loan Agreement or any other finance documents within a period of 180 days from the relevant due date. If debt due to senior lenders is outstanding, the Trust may declare a non-payment Event of Default only if one or more of the senior lenders declares an Event of Default in relation to amounts due to such senior lenders. • **Breach of Covenants and Undertakings:** IRB LTPL breaches any provision of the IRB LTPL Shareholder Loan Agreement or any other finance documents. • **Misrepresentation:** Any representation or statement made by IRB LTPL in any finance document or any other document delivered by or on behalf of IRB LTPL under or in connection with any transaction document is or proves to have been incorrect or misleading in any material respect when made or results in a material adverse effect on IRB LTPL or its project. • **Cessation of Business**: IRB LTPL ceasing or threatening or likely to cease, to carry on all or substantially all of its business or operations. • **Insolvency:** IRB LTPL is unable to, or presumed or deemed to be unable to, or admits its inability to, pay its debts as they fall due, suspends making payments on any of its debts or, by reason of actual or anticipated financial difficulties, commences negotiations with one or more of its creditors with a view to rescheduling any of its indebtedness. • **Insolvency proceedings:** Any corporate action, legal proceedings or other procedure is taken in relation to: (a) the suspension of payments, a moratorium of any indebtedness, winding-up, dissolution, administration, provisional supervision or reorganization (by way of voluntary arrangement, scheme of arrangement or otherwise) of IRB LTPL, other than a solvent liquidation or reorganization of IRB LTPL; (b) a composition or arrangement with any creditor of IRB LTPL, or an assignment for the benefit of creditors generally of IRB LTPL, or a class of such creditors; (c) the appointment of a liquidator, receiver, and manager, administrator, administrative receiver, compulsory manager, provisional supervisor or other similar officer in respect of IRB LTPL, or any of its assets; or (d) or any analogous procedure is taken in any jurisdiction. • **Unlawfulness and Invalidity:** (a) It is or becomes unlawful for IRB LTPL to perform its obligations under the IRB LTPL Shareholder Loan Agreement or any other finance documents; or (b) any finance document is not or ceases to be legal, valid, binding or enforceable. • **Nationalization or Expropriation**: Any governmental authority has taken or has threatened to take any action to expropriate, condemn, nationalize or seize the relevant project or whole or part of the assets of IRB LTPL or the whole or substantially whole or part of its project, resulting in IRB LTPL being deprived or threatened to deprive to carry on its business or which will have a material adverse effect on IRB LTPL or the relevant project on the operation of the business of IRB LTPL. • **Cross Default**: IRB LTPL defaults in the payment of any principal, interest, premium or other amount due (whether by scheduled maturity, mandatory prepayment, acceleration or demand) under any loan or credit agreement and/or defaults in the payments due under any existing facility agreement or the occurrence of an event of default under the existing facility agreements of IRB LTPL. On and at any time after the occurrence of an Event of Default which has not been waived or cured and which is continuing, the Trust may, upon the delivery of seven business days' notice to IRB LTPL of the occurrence of an Event of Default: (i) require all or part of the outstanding amounts to be payable immediately; and (ii) exercise such other rights as may be available to the Trust under the IRB LTPL Shareholder Loan Agreement, the finance documents or under applicable law. No further disbursement shall be made after the occurrence of an Event of Default.
Dispute Resolution	Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre in accordance with the Arbitration Rules of the Singapore International Arbitration Centre ("**SIAC Rules**") for the time being in force. The arbitration panel will consist of three arbitrators, each of which shall be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings shall be

	Delhi, India.
Governing Law	Laws of India

III. *Investment in IRB GTPL through subscription to equity shares*

The Investment Manager, on behalf of the Trust, proposes to utilize an estimated amount of ₹1,032.35 million from the Issue Proceeds to subscribe to 103,235,000 equity shares of IRB GTPL ("**IRB GTPL Subscription Shares**"). The Trustee (on behalf of the Trust), the Investment Manager and IRB GTPL have entered into the IRB GTPL Share Subscription Agreement for subscribing to the IRB GTPL Subscription Shares for a total consideration of ₹1,032.35 million. Certain other agreements are have also been entered into in connection with the investment by the Trust in IRB GTPL. For details of such agreement see "*Background and Structure of the Trust – Investment in IRB LTPL, IRB GTPL and IRB KTPL*" on page 103.

Also see "*Risk Factors – We are in the process of infusing further capital in IRB LTPL, IRB GTPL and IRB KTPL (pursuant to definitive agreements), which if not completed in a timely manner or at all, may adversely affect us*" on page 22.

Key terms of the IRB GTPL Share Subscription Agreement are set out below.

<u>*IRB GTPL Share Subscription Agreement*</u>

Certain definitions

"**Closing Date**" shall mean the date of completion of the actions set out in the IRB GTPL Share Subscription Agreement. Closing shall occur within five days from the date of allotment in the Issue.

"**Governmental Authority**" includes the SEBI, the NHAI, the Ministry of Road Transport and Highways of the Government of India or any state or union territory of India, the Reserve Bank of India, and any national, state, regional or local government or governmental, regulatory, statutory, administrative, fiscal, taxation, judicial, or government-owned body, department, commission, authority, court, arbitrator, tribunal, agency or entity, in India or outside India, in each case, having jurisdiction over any of the parties, their operations, or the transactions contemplated in the IRB GTPL Share Subscription Agreement and the IRB GTPL transaction documents.

"**IRB GTPL Material Adverse Change**" shall mean any fact, circumstance, or condition that, individually or in the aggregate, has a material adverse effect on or material adverse change in: (i) the business, assets (whether tangible or intangible), liabilities, financial condition or regulatory status of IRB GTPL; or (ii) the ability of IRB GTPL to perform its obligations under any IRB GTPL transaction document, or to complete any of the transactions contemplated thereunder; or (iii) the validity, legality or enforceability of the rights or remedies of the Trust or the Investment Manager under the IRB GTPL Share Subscription Agreement.

"**Subscription Price**" shall mean the price of ₹10 per IRB GTPL Subscription Share.

Issuance and subscription to the IRB GTPL Subscription Shares

Subject to the terms and conditions of the IRB GTPL Share Subscription Agreement, IRB GTPL has agreed to issue the IRB GTPL Subscription Shares to the Trust, and the Trust has agreed to subscribe to all the IRB GTPL Subscription Shares, free and clear from all encumbrances, together with all rights, title, interest and benefits appertaining thereto, on the Closing Date, at the Subscription Price per IRB GTPL Subscription Share.

The Trust shall ensure that such number of the IRB GTPL Subscription Shares aggregating to not more than 51% of the total equity share capital of IRB GTPL are pledged with the relevant lenders of IRB GTPL within a specified timeline from the Closing Date in accordance with the financing documents of IRB GTPL.

IRB GTPL is also required to complete the necessary form filings with the Registrar of Companies, Maharashtra in relation to the actions contemplated under the IRB GTPL Share Subscription Agreement post-closing. Further, IRB GTPL is also required to provide a valuation report to the Trust for tax purposes in relation to the fair market value of the IRB GTPL Subscription Shares.

The Trust has undertaken to ensure that the proceeds of the share subscription are utilized solely for funding of the total project cost of IRB GTPL's project and that the concession fee is paid to the relevant concessioning authority by IRB GTPL, failing which the parties have agreed to certain arrangements in relation to dealing with the proceeds of the share subscription.

Conditions Precedent

The obligations of the parties to complete the transaction under the IRB GTPL Share Subscription Agreement is subject to the fulfilment of certain conditions by IRB GTPL on or before the Closing Date, to the satisfaction of the Trust, unless waived or deferred in writing by the Trust at its sole discretion, which, *inter-alia*, include:

- no Governmental Authority of competent jurisdiction shall have enacted, issued, promulgated or enforced any applicable law that prohibits or makes illegal the consummation of the transactions contemplated under any of the IRB GTPL transaction documents;
- there shall be no legal proceeding pending against, or threatened against IRB GTPL wherein an unfavorable judgment, decree, injunction or order could reasonably result in any of the transactions contemplated herein being declared unlawful or rescinded, and no such judgment, decree, injunction or order shall be in effect;
- the IRB GTPL business plan and the IRB GTPL annual budget shall be in agreed form;
- the representations and warranties provided by IRB GTPL under the IRB GTPL Share Subscription Agreement shall be true, complete and accurate in all respects as of the date of execution of the IRB GTPL Share Subscription Agreement and as of the Closing Date (except those representations and warranties that address matters only as of a specified date, which shall be true, complete and accurate in all respects as of that specified date);
- IRB GTPL shall have obtained all necessary consents in connection with the execution of the IRB GTPL Share Subscription Agreement, the IRB GTPL transaction documents and the completion of the transactions contemplated thereunder;
- no IRB GTPL Material Adverse Change shall be subsisting as on the Closing Date.
- IRB GTPL shall have duly performed and complied in all respects with all agreements, covenants and conditions required by the IRB GTPL transaction documents to be performed or complied with by them prior to or on the Closing Date;
- IRB GTPL shall have passed: (a) resolutions of its board of directors at a validly convened meeting of the board of directors authorizing the issuance and allotment of the IRB GTPL Subscription Shares to the Trust, on a private placement basis, subject to the approval of IRB GTPL's shareholders; and (b) special resolutions of the shareholders of IRB GTPL at a validly convened general meeting of IRB GTPL approving the issue and allotment of the IRB GTPL Subscription Shares to the Trust, on a private placement basis, each in accordance with the Companies Act, and certified copies of such resolutions shall have been delivered to the Investment Manager (on behalf of the Trust);
- IRB GTPL shall have issued a private placement offer letter in the form prescribed under the Companies Act to the Trust in relation to the issuance of the IRB GTPL Subscription Shares and shall have recorded the names of the Trust in the form prescribed under the Companies Act;
- IRB GTPL shall have completed the filing with the Registrar of Companies, Maharashtra of the Forms MGT-14 in relation to the board resolutions and shareholders' resolutions;
- IRB GTPL shall have obtained a valuation report from a registered valuer appointed in accordance with Section 247 of the Companies Act;
- IRB GTPL shall have opened a separate bank account to receive the Subscription Amount as required in accordance with Section 42 of the Companies Act and shall have provided necessary details relating to such account to the Trust;
- there shall not have been any restriction or any threatened restriction, under applicable law which: (i) involves a challenge to or seeks to or prohibits, prevents, restrains, restricts, delays, makes illegal or otherwise interferes with the consummation of any of the transactions contemplated under the IRB GTPL Share Subscription Agreement, or impairs or prejudices the due, proper and irrevocable consummation of the transactions contemplated under the IRB GTPL Share Subscription Agreement, or (ii) seeks to impose conditions upon the ownership or operations of IRB GTPL or which affects the ability of the Trust to invest in IRB GTPL as contemplated under the IRB GTPL Share Subscription Agreement; and
- the Trust shall have received a certificate (along with all the supporting documents), dated the Closing Date and signed by a duly authorized officer of IRB GTPL, that each of the conditions set forth above have been satisfied.

Representations and Warranties

IRB GTPL, the Investment Manager and the Trust (acting through the Trustee) have provided representations and warranties in relation to, *inter-alia*, their incorporation, existence, authority to enter into the agreement, eligibility to undertake the transactions under the agreement and no conflicts.

IRB GTPL has represented that, from the date of the IRB GTPL Share Subscription Agreement until the Closing Date, its business will be conducted in the ordinary course and in accordance with applicable laws and the other transaction documents.

The Trust and IRB GTPL have agreed and acknowledged that IRB and its affiliates can continue to include IRB GTPL and its project as part of their experience and eligibility in any bids for infrastructure projects submitted by IRB or its affiliates in the future even after the Closing Date, subject to the conditions set out in the IRB GTPL Share Subscription Agreement.

Governing Law, Dispute Resolution and Termination

The IRB GTPL Share Subscription Agreement is governed by the laws of India. Any dispute shall be referred to and finally resolved by arbitration administered by the SIAC in accordance with the SIAC Rules for the time being in force. The arbitration panel will consist of three arbitrators, each of which will be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings will be Delhi, India.

The IRB GTPL Share Subscription Agreement may be terminated prior to the Closing Date: (i) by the mutual written agreement of the parties; (ii) upon termination of the Framework Agreement; or (iii) by the Trust or IRB GTPL, if closing has not occurred by the long stop date (six months from the date of the IRB GTPL Share Subscription Agreement).

IV. *Providing loans to IRB GTPL towards funding of the total project cost*

The Investment Manager, on behalf of the Trust, proposes to utilize an estimated amount of ₹3,098.55 million from the Issue Proceeds to provide unsecured loans to IRB GTPL under the IRB GTPL Shareholder Loan Agreement. IRB GTPL in turn intends to utilize the proceeds of such financing towards funding of the total cost of its project.

Also see "*Risk Factors – We are in the process of infusing further capital in IRB LTPL, IRB GTPL and IRB KTPL (pursuant to definitive agreements), which if not completed in a timely manner or at all, may adversely affect us*" on page 22.

Key terms of the IRB GTPL Shareholder Loan Agreement are set out below.

Purpose	IRB GTPL shall utilize the loan amounts solely for funding of the total project cost of IRB GTPL. Any loan amounts disbursed to IRB GTPL out of the Issue Proceeds shall be utilized solely for such purpose.
Term	IRB GTPL shall repay the loan at the end of the concession period under the relevant concession agreement or as mutually agreed between the parties to the Shareholder Loan Agreement.
Interest	• IRB GTPL shall pay accrued interest (subject to withholding of applicable taxes) at the rate of 16% p.a., or or such other rate as may be decided mutually by the parties to the IRB GTPL Shareholder Loan Agreement from time to time. • Interest will accrue and be chargeable from the appointed date under the concession agreement. • Interest will be payable when able following the appointed date in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter, provided that IRB GTPL, may, at its discretion, elect to pay interest on a monthly basis, and such interest shall be payable on the first day of the subsequent month for which the interest is being paid.
Repayment	• The Trust may call on IRB GTPL to prepay the loan, in full or part, or permit IRB GTPL to make payments of the outstanding loan, in full or part, after the date such payment is due, at any time during the term of the IRB GTPL Shareholder Loan Agreement until the final settlement date (as defined in the IRB GTPL Shareholder Loan Agreement). • IRB GTPL may prepay the whole or part of the loan together with interest on that amount

	accrued up to the date of prepayment, by giving a prior written notice of not less than 30 days to the Trust, specifying the amount to be prepaid and the date of proposed prepayment. • The loan (in one or more tranches) provided under the IRB GTPL Shareholder Loan Agreement shall, at all times be subordinate to the debt provided by the senior lenders. Subject to the terms of the financing agreements and the escrow agreements, payments towards the loan amounts (including interest) shall be made out of balance available in the escrow account for utilization in accordance with the instructions of IRB GTPL on the relevant interest payment date or repayment date, after meeting all payments due to the senior lenders as of such date.
Security	Unsecured
Events of Default	The occurrence of any of the events or circumstances set out below shall constitute an "**Event of Default**", if not remedied within 180 days (or such extended period as may be provided by the Trust at its sole discretion) from the date of receiving notice of such default from the Trust. IRB GTPL shall promptly give written notice to the Trust of any Event of Default and of any other event which, with the giving of notice or lapse of time or otherwise could constitute an Event of Default, and inform the Trust of any action taken or proposed to be taken by IRB GTPL in connection therewith. • **Non-Payment:** IRB GTPL fails to pay any amount due under the IRB GTPL Shareholder Loan Agreement or any other finance documents within a period of 180 days from the relevant due date. If debt due to senior lenders is outstanding, the Trust may declare a non-payment Event of Default only if one or more of the senior lenders declares an Event of Default in relation to amounts due to such senior lenders. • **Breach of Covenants and Undertakings:** IRB GTPL breaches any provision of the IRB GTPL Shareholder Loan Agreement or any other finance documents. • **Misrepresentation:** Any representation or statement made by IRB GTPL in any finance document or any other document delivered by or on behalf of IRB GTPL under or in connection with any transaction document is or proves to have been incorrect or misleading in any material respect when made or results in a material adverse effect on IRB GTPL or its project. • **Cessation of Business**: IRB GTPL ceasing or threatening or likely to cease, to carry on all or substantially all of its business or operations. • **Insolvency:** IRB GTPL is unable to, or presumed or deemed to be unable to, or admits its inability to, pay its debts as they fall due, suspends making payments on any of its debts or, by reason of actual or anticipated financial difficulties, commences negotiations with one or more of its creditors with a view to rescheduling any of its indebtedness. • **Insolvency proceedings:** Any corporate action, legal proceedings or other procedure is taken in relation to: (a) the suspension of payments, a moratorium of any indebtedness, winding-up, dissolution, administration, provisional supervision or reorganization (by way of voluntary arrangement, scheme of arrangement or otherwise) of IRB GTPL, other than a solvent liquidation or reorganization of IRB GTPL; (b) a composition or arrangement with any creditor of IRB GTPL, or an assignment for the benefit of creditors generally of IRB GTPL, or a class of such creditors; (c) the appointment of a liquidator, receiver, and manager, administrator, administrative receiver, compulsory manager, provisional supervisor or other similar officer in respect of IRB GTPL, or any of its assets; or (d) or any analogous procedure is taken in any jurisdiction. • **Unlawfulness and Invalidity:** (a) It is or becomes unlawful for IRB GTPL to perform its obligations under the IRB GTPL Shareholder Loan Agreement or any other finance documents; or (b) any finance document is not or ceases to be legal, valid, binding or enforceable. • **Nationalization or Expropriation**: Any governmental authority has taken or has threatened to take any action to expropriate, condemn, nationalize or seize the relevant project or whole or part of the assets of IRB GTPL or the whole or substantially whole or part of its project, resulting in IRB GTPL being deprived or threatened to deprive to carry on its business or which will have a material adverse effect on IRB GTPL or the relevant project on the operation of the business of IRB GTPL.

	• **Cross Default**: IRB GTPL defaults in the payment of any principal, interest, premium or other amount due (whether by scheduled maturity, mandatory prepayment, acceleration or demand) under any loan or credit agreement and/or defaults in the payments due under any existing facility agreement or the occurrence of an event of default under the existing facility agreements of IRB GTPL. On and at any time after the occurrence of an Event of Default which has not been waived or cured and which is continuing, the Trust may, upon the delivery of seven business days' notice to IRB GTPL of the occurrence of an Event of Default: (i) require all or part of the outstanding amounts to be payable immediately; and (ii) exercise such other rights as may be available to the Trust under the IRB GTPL Shareholder Loan Agreement, the finance documents or under applicable law. No further disbursement shall be made after the occurrence of an Event of Default.
Dispute Resolution	Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre in accordance with the Arbitration Rules of the Singapore International Arbitration Centre ("**SIAC Rules**") for the time being in force. The arbitration panel will consist of three arbitrators, each of which shall be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings shall be Delhi, India.
Governing Law	Laws of India

V. ***Investment in IRB KTPL through subscription to equity shares***

The Investment Manager, on behalf of the Trust, proposes to utilize an estimated amount of ₹392.975 million from the Issue Proceeds to subscribe to 39,297,500 equity shares of IRB KTPL ("**IRB KTPL Subscription Shares**"). The Trustee (on behalf of the Trust), the Investment Manager and IRB KTPL have entered into the IRB KTPL Share Subscription Agreement for subscribing to the IRB KTPL Subscription Shares for a total consideration of ₹392.975 million. Certain other agreements are have also been entered into in connection with the investment by the Trust in IRB KTPL. For details of such agrements see "*Background and Structure of the Trust – Investment in IRB LTPL, IRB GTPL and IRB KTPL*" on page 103.

Also see "*Risk Factors – We are in the process of infusing further capital in IRB LTPL, IRB GTPL and IRB KTPL (pursuant to definitive agreements), which if not completed in a timely manner or at all, may adversely affect us*" on page 22.

Key terms of the IRB KTPL Share Subscription Agreement are set out below.

IRB KTPL Share Subscription Agreement

Certain definitions

"**Closing Date**" shall mean the date of completion of the actions set out in the IRB KTPL Share Subscription Agreement. Closing shall occur within five days from the date of allotment in the Issue.

"**Governmental Authority**" includes the SEBI, the NHAI, the Ministry of Road Transport and Highways of the Government of India or any state or union territory of India, the Reserve Bank of India, and any national, state, regional or local government or governmental, regulatory, statutory, administrative, fiscal, taxation, judicial, or government-owned body, department, commission, authority, court, arbitrator, tribunal, agency or entity, in India or outside India, in each case, having jurisdiction over any of the parties, their operations, or the transactions contemplated in the IRB KTPL Share Subscription Agreement and the IRB KTPL transaction documents.

"**IRB KTPL Material Adverse Change**" shall mean any fact, circumstance, or condition that, individually or in the aggregate, has a material adverse effect on or material adverse change in: (i) the business, assets (whether tangible or intangible), liabilities, financial condition or regulatory status of IRB KTPL; or (ii) the ability of IRB KTPL to perform its obligations under any IRB KTPL transaction document, or to complete any of the transactions contemplated thereunder; or (iii) the validity, legality or enforceability of the rights or remedies of the Trust or the Investment Manager under the IRB KTPL Share Subscription Agreement.

"**Subscription Price**" shall mean the price of ₹10 per IRB KTPL Subscription Share.

Issuance and subscription to the IRB KTPL Subscription Shares

Subject to the terms and conditions of the IRB KTPL Share Subscription Agreement, IRB KTPL has agreed to issue the IRB KTPL Subscription Shares to the Trust, and the Trust has agreed to subscribe to all the IRB KTPL Subscription Shares, free and clear from all encumbrances, together with all rights, title, interest and benefits appertaining thereto, on the Closing Date, at the Subscription Price per IRB KTPL Subscription Share.

The Trust shall ensure that such number of the IRB KTPL Subscription Shares aggregating to not more than 51% of the total equity share capital of IRB KTPL are pledged with the relevant lenders of IRB KTPL within a specified timeline from the Closing Date in accordance with the financing documents of IRB KTPL.

IRB KTPL is also required to complete the necessary form filings with the Registrar of Companies, Maharashtra in relation to the actions contemplated under the IRB KTPL Share Subscription Agreement post-closing. Further, IRB KTPL is also required to provide a valuation report to the Trust for tax purposes in relation to the fair market value of the IRB KTPL Subscription Shares.

The Trust has undertaken to ensure that the proceeds of the share subscription are utilized solely for funding of the total project cost of IRB KTPL's project and that the concession fee is paid to the relevant concessioning authority by IRB KTPL, failing which the parties have agreed to certain arrangements in relation to dealing with the proceeds of the share subscription.

Conditions Precedent

The obligations of the parties to complete the transaction under the IRB KTPL Share Subscription Agreement is subject to the fulfilment of certain conditions by IRB KTPL on or before the Closing Date, to the satisfaction of the Trust, unless waived or deferred in writing by the Trust at its sole discretion, which, *inter-alia*, include:

- no Governmental Authority of competent jurisdiction shall have enacted, issued, promulgated or enforced any applicable law that prohibits or makes illegal the consummation of the transactions contemplated under any of the IRB KTPL transaction documents;
- there shall be no legal proceeding pending against, or threatened against IRB KTPL wherein an unfavorable judgment, decree, injunction or order could reasonably result in any of the transactions contemplated herein being declared unlawful or rescinded, and no such judgment, decree, injunction or order shall be in effect;
- the IRB KTPL business plan and the IRB KTPL annual budget shall be in agreed form;
- the representations and warranties provided by IRB KTPL under the IRB KTPL Share Subscription Agreement shall be true, complete and accurate in all respects as of the date of execution of the IRB KTPL Share Subscription Agreement and as of the Closing Date (except those representations and warranties that address matters only as of a specified date, which shall be true, complete and accurate in all respects as of that specified date);
- IRB KTPL shall have obtained all necessary consents in connection with the execution of the IRB KTPL Share Subscription Agreement, the IRB KTPL transaction documents and the completion of the transactions contemplated thereunder;
- no IRB KTPL Material Adverse Change shall be subsisting as on the Closing Date.
- IRB KTPL shall have duly performed and complied in all respects with all agreements, covenants and conditions required by the IRB KTPL transaction documents to be performed or complied with by them prior to or on the Closing Date;
- IRB KTPL shall have passed: (a) resolutions of its board of directors at a validly convened meeting of the board of directors authorizing the issuance and allotment of the IRB KTPL Subscription Shares to the Trust, on a private placement basis, subject to the approval of IRB KTPL's shareholders; and (b) special resolutions of the shareholders of IRB KTPL at a validly convened general meeting of IRB KTPL approving the issue and allotment of the IRB KTPL Subscription Shares to the Trust, on a private placement basis, each in accordance with the Companies Act, and certified copies of such resolutions shall have been delivered to the Investment Manager (on behalf of the Trust);
- IRB KTPL shall have issued a private placement offer letter in the form prescribed under the Companies Act to the Trust in relation to the issuance of the IRB KTPL Subscription Shares and shall have recorded the names of the Trust in the form prescribed under the Companies Act;
- IRB KTPL shall have completed the filing with the Registrar of Companies, Maharashtra of the Forms MGT-14 in relation to the board resolutions and shareholders' resolutions;
- IRB KTPL shall have obtained a valuation report from a registered valuer appointed in accordance with Section 247 of the Companies Act;

- IRB KTPL shall have opened a separate bank account to receive the Subscription Amount as required in accordance with Section 42 of the Companies Act and shall have provided necessary details relating to such account to the Trust;
- there shall not have been any restriction or any threatened restriction, under applicable law which: (i) involves a challenge to or seeks to or prohibits, prevents, restrains, restricts, delays, makes illegal or otherwise interferes with the consummation of any of the transactions contemplated under the IRB KTPL Share Subscription Agreement, or impairs or prejudices the due, proper and irrevocable consummation of the transactions contemplated under the IRB KTPL Share Subscription Agreement, or (ii) seeks to impose conditions upon the ownership or operations of IRB KTPL or which affects the ability of the Trust to invest in IRB KTPL as contemplated under the IRB KTPL Share Subscription Agreement; and
- the Trust shall have received a certificate (along with all the supporting documents), dated the Closing Date and signed by a duly authorized officer of IRB KTPL, that each of the conditions set forth above have been satisfied.

Representations and Warranties

IRB KTPL, the Investment Manager and the Trust (acting through the Trustee) have provided representations and warranties in relation to, *inter-alia*, their incorporation, existence, authority to enter into the agreement, eligibility to undertake the transactions under the agreement and no conflicts.

IRB KTPL has represented that, from the date of the IRB KTPL Share Subscription Agreement until the Closing Date, its business will be conducted in the ordinary course and in accordance with applicable laws and the other transaction documents.

The Trust and IRB KTPL have agreed and acknowledged that IRB and its affiliates can continue to include IRB KTPL and its project as part of their experience and eligibility in any bids for infrastructure projects submitted by IRB or its affiliates in the future even after the Closing Date, subject to the conditions set out in the IRB KTPL Share Subscription Agreement.

Governing Law, Dispute Resolution and Termination

The IRB KTPL Share Subscription Agreement is governed by the laws of India. Any dispute shall be referred to and finally resolved by arbitration administered by the SIAC in accordance with the SIAC Rules for the time being in force. The arbitration panel will consist of three arbitrators, each of which will be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings will be Delhi, India.

The IRB KTPL Share Subscription Agreement may be terminated prior to the Closing Date: (i) by the mutual written agreement of the parties; (ii) upon termination of the Framework Agreement; or (iii) by the Trust or IRB KTPL, if closing has not occurred by the long stop date (six months from the date of the IRB KTPL Share Subscription Agreement).

VI. *Providing loans to IRB KTPL towards funding of the total project cost*

The Investment Manager, on behalf of the Trust, proposes to utilize an estimated amount of ₹1,180.425 million from the Issue Proceeds to provide unsecured loans to IRB KTPL under the IRB KTPL Shareholder Loan Agreement. IRB KTPL in turn intends to utilize the proceeds of such financing towards funding of the total cost of its project.

Also see "*Risk Factors – We are in the process of infusing further capital in IRB LTPL, IRB GTPL and IRB KTPL (pursuant to definitive agreements), which if not completed in a timely manner or at all, may adversely affect us*" on page 22.

Key terms of the IRB KTPL Shareholder Loan Agreement are set out below.

Purpose	IRB KTPL shall utilize the loan amounts solely for funding of the total project cost of IRB KTPL. Any loan amounts disbursed to IRB KTPL out of the Issue Proceeds shall be utilized solely for such purpose.
Term	IRB KTPL shall repay the loan at the end of the concession period under the relevant concession agreement or as mutually agreed between the parties to the Shareholder Loan Agreement.

Interest	• IRB KTPL shall pay accrued interest (subject to withholding of applicable taxes) at the rate of 16% p.a., or or such other rate as may be decided mutually by the parties to the IRB KTPL Shareholder Loan Agreement from time to time. • Interest will accrue and be chargeable from the appointed date under the concession agreement. • Interest will be payable when able following the appointed date in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter, provided that IRB KTPL, may, at its discretion, elect to pay interest on a monthly basis, and such interest shall be payable on the first day of the subsequent month for which the interest is being paid.
Repayment	• The Trust may call on IRB KTPL to prepay the loan, in full or part, or permit IRB KTPL to make payments of the outstanding loan, in full or part, after the date such payment is due, at any time during the term of the IRB KTPL Shareholder Loan Agreement until the final settlement date (as defined in the IRB KTPL Shareholder Loan Agreement). • IRB KTPL may prepay the whole or part of the loan together with interest on that amount accrued up to the date of prepayment, by giving a prior written notice of not less than 30 days to the Trust, specifying the amount to be prepaid and the date of proposed prepayment. • The loan (in one or more tranches) provided under the IRB KTPL Shareholder Loan Agreement shall, at all times be subordinate to the debt provided by the senior lenders. Subject to the terms of the financing agreements and the escrow agreements, payments towards the loan amounts (including interest) shall be made out of balance available in the escrow account for utilization in accordance with the instructions of IRB KTPL on the relevant interest payment date or repayment date, after meeting all payments due to the senior lenders as of such date.
Security	Unsecured
Events of Default	The occurrence of any of the events or circumstances set out below shall constitute an "**Event of Default**", if not remedied within 180 days (or such extended period as may be provided by the Trust at its sole discretion) from the date of receiving notice of such default from the Trust. IRB KTPL shall promptly give written notice to the Trust of any Event of Default and of any other event which, with the giving of notice or lapse of time or otherwise could constitute an Event of Default, and inform the Trust of any action taken or proposed to be taken by IRB KTPL in connection therewith. • **Non-Payment:** IRB KTPL fails to pay any amount due under the IRB KTPL Shareholder Loan Agreement or any other finance documents within a period of 180 days from the relevant due date. If debt due to senior lenders is outstanding, the Trust may declare a non-payment Event of Default only if one or more of the senior lenders declares an Event of Default in relation to amounts due to such senior lenders. • **Breach of Covenants and Undertakings:** IRB KTPL breaches any provision of the IRB KTPL Shareholder Loan Agreement or any other finance documents. • **Misrepresentation:** Any representation or statement made by IRB KTPL in any finance document or any other document delivered by or on behalf of IRB KTPL under or in connection with any transaction document is or proves to have been incorrect or misleading in any material respect when made or results in a material adverse effect on IRB KTPL or its project. • **Cessation of Business**: IRB KTPL ceasing or threatening or likely to cease, to carry on all or substantially all of its business or operations. • **Insolvency:** IRB KTPL is unable to, or presumed or deemed to be unable to, or admits its inability to, pay its debts as they fall due, suspends making payments on any of its debts or, by reason of actual or anticipated financial difficulties, commences negotiations with one or more of its creditors with a view to rescheduling any of its indebtedness. • **Insolvency proceedings:** Any corporate action, legal proceedings or other procedure is taken in relation to: (a) the suspension of payments, a moratorium of any indebtedness, winding-up, dissolution, administration, provisional supervision or reorganization (by way of voluntary arrangement, scheme of arrangement or otherwise) of IRB KTPL, other than a solvent liquidation or reorganization of IRB KTPL; (b) a composition or

	arrangement with any creditor of IRB KTPL, or an assignment for the benefit of creditors generally of IRB KTPL, or a class of such creditors; (c) the appointment of a liquidator, receiver, and manager, administrator, administrative receiver, compulsory manager, provisional supervisor or other similar officer in respect of IRB KTPL, or any of its assets; or (d) or any analogous procedure is taken in any jurisdiction. • **Unlawfulness and Invalidity:** (a) It is or becomes unlawful for IRB KTPL to perform its obligations under the IRB KTPL Shareholder Loan Agreement or any other finance documents; or (b) any finance document is not or ceases to be legal, valid, binding or enforceable. • **Nationalization or Expropriation**: Any governmental authority has taken or has threatened to take any action to expropriate, condemn, nationalize or seize the relevant project or whole or part of the assets of IRB KTPL or the whole or substantially whole or part of its project, resulting in IRB KTPL being deprived or threatened to deprive to carry on its business or which will have a material adverse effect on IRB KTPL or the relevant project on the operation of the business of IRB KTPL. • **Cross Default**: IRB KTPL defaults in the payment of any principal, interest, premium or other amount due (whether by scheduled maturity, mandatory prepayment, acceleration or demand) under any loan or credit agreement and/or defaults in the payments due under any existing facility agreement or the occurrence of an event of default under the existing facility agreements of IRB KTPL. On and at any time after the occurrence of an Event of Default which has not been waived or cured and which is continuing, the Trust may, upon the delivery of seven business days' notice to IRB KTPL of the occurrence of an Event of Default: (i) require all or part of the outstanding amounts to be payable immediately; and (ii) exercise such other rights as may be available to the Trust under the IRB KTPL Shareholder Loan Agreement, the finance documents or under applicable law. No further disbursement shall be made after the occurrence of an Event of Default.
Dispute Resolution	Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre in accordance with the Arbitration Rules of the Singapore International Arbitration Centre ("**SIAC Rules**") for the time being in force. The arbitration panel will consist of three arbitrators, each of which shall be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings shall be Delhi, India.
Governing Law	Laws of India

In addition to the above, the Investment Manager may utilize the Issue Proceeds towards other expenditure (in the ordinary course of business of the Trust) considered expedient. Any such utilization other than as contemplated towards the objects of the Issue described above will be subject to the consent of all the Unitholders. In case of a shortfall in the Issue Proceeds or cost overruns, the Investment Manager may explore a range of options including utilizing the Trust's or the Project SPVs' internal accruals or seeking debt financing in accordance with the business plan and annual budget. The objects of this Issue are proposed to be financed solely through the Issue Proceeds.

Schedule of Deployment

The Investment Manager proposes to deploy the Issue Proceeds during the Financial Year 2024, depending on various factors, including the actual timing of completion of this Issue and the receipt of the Issue Proceeds.

Interim use of Issue Proceeds

Pending utilization of the Issue Proceeds for the purposes described above, the Investment Manager may invest the funds only in deposits in one or more scheduled commercial banks included in the Second Schedule of RBI Act. Pending utilization of the Issue Proceeds for the objects of this Issue, the Investment Manager shall not utilize the Issue Proceeds for any investment in the equity markets (excluding any investment in the equity shares of the Project SPVs), real estate or related products.

STATEMENT OF TAX BENEFITS

Statement of possible tax consideration / benefits available to the Trust and its Unitholders under applicable laws in India

To,

IDBI TRUSTEESHIP SERVICES LIMITED
(Trustee of IRB Infrastructure Trust) Ground Floor, Universal Insurance Building, Sir Phirozshah Mehta Road Fort, Mumbai 400 001, Maharashtra India

MMK Toll Road Private Limited
(As the Investment Manager of the IRB Infrastructure Trust) Off No-11th Floor/1101,
Hiranandani Knowledge Park, Technology Street,
Hill Side Avenue, Powai, Mumbai 400 076,

Dear Sirs/Madam,

Sub: Statement of possible tax considerations / benefits available to the IRB Infrastructure Trust and its Unitholders under the Income-tax Act, 1961.

We refer to the proposed rights issue (the "Issue") of the units of IRB Infrastructure Trust ("the Trust") and enclose the statement showing the current position of tax considerations / benefits available to the Trust and to its Unitholders as per the provisions of the Income-tax Act, 1961 ('the IT Act') presently in force in India (i.e. applicable for the financial year ending 31 March 2024 relevant to the assessment year 2024-25) for inclusion in the letter of offer to be issued in connection with the Issue.

This statement is provided for general information purposes only and each investor is advised to consult its own tax consultant with respect to specific income tax implications arising out of participation in the rights issue.

Unless otherwise specified, sections referred below are sections of the IT Act. The benefits set out below are subject to conditions specified therein read with the Income-tax Rules, 1962 presently in force.

The benefits outlined in the enclosed statement based on the information and particulars provided by the Trust are neither exhaustive nor conclusive.

We do not express any opinion or provide any assurance as to whether:

- the Trust or its Unitholders will continue to obtain these benefits in future;
- the conditions prescribed for availing the benefits have been/would be met with; and
- the revenue authorities/courts will concur with the views expressed herein.

We hereby give our consent to include the enclosed statement regarding tax benefits available to the Trust and to its Unitholders in the letter of offer in connection with the rights issue of the units of the Trust which is intended to be filed with Securities and Exchange Board of India, the National Stock Exchange of India Limited (being the stock exchange where the units of the Trust are listed) and any regulatory authority as may be required under applicable law.

Limitations

No assurance is given that the revenue authorities/courts will concur with the views expressed herein. Our views are based on the existing provisions of law and its interpretation, which are subject to changes from time to time. We do not assume responsibility to update the views consequent to such changes. We shall not be liable to any claims, liabilities or expenses relating to this assignment except to the extent of fees relating to this assignment, as finally judicially determined to have resulted primarily from bad faith or intentional misconduct. We will not be liable to any other person in respect of this statement.

This statement of possible direct tax benefits enumerated above is as per the Income-tax Act as amended by the Finance Act 2023. The statement of possible Direct-tax Benefits sets out the possible tax benefits available to the Trust and its Unitholders under the current tax laws presently in force in India. Several of these benefits available are dependent on the Trust or its Unitholders fulfilling the conditions prescribed under the relevant tax laws.

The information provided above sets out the possible tax benefits available to the Unitholders in a summary manner only and is not a complete analysis or listing of all potential tax consequences of the purchase, ownership and disposal of units, under the current tax laws presently in force in India. It is not exhaustive or comprehensive and is not intended to be a substitute for professional advice.

For Gokhale & Sathe,
Chartered Accountants,
ICAI registration number: 103264W

CA Kaustubh Deshpande,
Partner
Membership No. 121011 UDIN:
24121011BKAAMI3217
Place: Mumbai
Date: March 11, 2024

ANNEXURE TO STATEMENT OF POSSIBLE TAX BENEFITS AVAILABLE / CONSIDERATIONS APPLICABLE TO IRB INFRASTRUCTURE TRUST AND ITS UNITHOLDERS UNDER APPLICABLE LAWS IN INDIA UNDER THE INCOME-TAX ACT, 1961 (hereinafter referred to as 'the Act')

TAX BENEFITS AVAILABLE / CONSIDERATIONS APPLICABLE TO IRB INFRASTRUCTURE TRUST ('TRUST') UNDER THE ACT

IRB Infrastructure Trust is an Infrastructure Investment Trust under the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, made under the Securities and Exchange Board of India Act, 1992.

Section 2(13A) of the Income Tax Act which defines "Business Trust" has been amended by Finance Act 2020 with effect from 1st April 2021 (i.e. from AY 2021-22) to remove the requirement of listing of units of the trust on stock exchange.

The following benefits are available to a Business Trust after fulfilling conditions as per applicable provisions of the Act and the guidelines prescribed by the Securities and Exchange Board of India ('SEBI') (including the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, as amended) ('SEBI Regulations').

Tax benefit in the hands of the Trust in respect of interest and dividend income:

(a) Interest received or receivable by the Trust from the Special Purpose Vehicle (SPV) would be exempt from tax. [10(23FC)(a)]

(b) Dividend received or receivable by the Trust from a Special Purpose Vehicle (SPV) shall be exempt from tax. [10(23FC)(b)]

For the purpose of the above, "special purpose vehicle" would mean an Indian company in which the business trust holds controlling interest and any specific percentage of shareholding or interest, as may be required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014.

Accordingly, sec. 194A(3)(xi) exempts SPV from the provisions of tax deduction at source in respect of interest paid/payable to the business trust.

Also, sec. 194 provides that the tax deduction at source is not applicable in respect of dividend credited or paid to a business trust by a special purpose vehicle.

The Act has amended section 193 to remove the requirement to withhold tax on payment of interest on securities (like debentures) by SPV to a business trust.

Section 10(34A) of the Act - Income from buy back of shares:

Further, income arising from buy-back of shares to which provision of section 115QA are applicable in hands of the company, shall not be taxable as per section 10(34A) of the Act in the hands of the Trust.

Section 115UA(2) read with section 111A, section 112 of the Act – Taxability of business income, capital gains and income from other sources in the hands of the Trust:

In terms of section 115UA(2) of the Act, the total income of the Trust shall be chargeable to tax at the maximum marginal rates in force except for the income chargeable to tax on transfer of Short-Term Capital assets under section 111A and Long Terms Capital assets under section 112 of the Act and income referred to in Sec. 10(23FC)

If the period of holding of a security (other than a unit) listed on a recognized stock exchange in India or a unit of the Unit Trust of India or a unit of an equity-oriented fund or a zero-coupon bond is more than 12 months, it will be considered a long-term capital asset as per section 2(29AA) of the Act. With respect to shares of a company not being listed on a recognized stock exchange or immovable property, being land, building, or both, the determinative period of holding shall be more than 24 months for it to be regarded as long- term capital asset. With respect to other assets including a unit of a mutual fund other than equity oriented mutual fund or unit of a business trust, the determinative period of holding is more than 36 months for it to be regarded as long-term capital asset.

As per the provisions of section 111A of the Act, any income arising from transfer of short- term capital asset being an equity share in a company or a unit of an equity-oriented fund or a unit of an eligible business trust, transacted through a recognized stock exchange and subject to STT, will be taxable at a concessional rate of 15% (plus applicable surcharge and cess, if any).

As per the provisions of section 112(1)(d) of the Act, gains arising on the transfer of long- term capital assets shall be chargeable to tax in the hands of the Trust at the rate of 20% (plus applicable surcharge and cess). However, as per the proviso to section 112 of the Act, the tax on long term capital gains on transfer of listed securities (other than units) or Zero-Coupon Bonds shall be at the rate of 10% (plus applicable surcharge and cess) without indexation benefit.

With a view to grandfather gains notionally earned by investors up to 31st January 2018, for securities acquired till such date, it has been provided that taxable gains will be determined considering the cost which will be higher of:

- Actual cost of acquisition; or
- Lower of sale price and Fair Market Value (as specifically defined under the Act) (Sec. 55(2)(ac))

In accordance with, and subject to the conditions, including the limit of investment of ₹ 50 lakhs, capital gains arising on transfer of a long term capital asset, being land or building or both, shall be exempt from capital gains under section 54EC if the gains are invested within 6 months from the date of transfer in purchase of specified bonds (redeemable after five years and issued on or after 1 April 2018) issued by National Highways Authority of India (NHAI) or Rural Electrification Corporation Ltd (RECL) or any other bond notified by the Central Government, if permitted to be invested by an Investment trust as per the extant governing regulations. In case the whole of the gains are not so invested, the exemption shall be allowed on a pro rata basis.

As per section 70 read with section 74 of the Act, short term capital loss arising during a year is allowed to be set-off against short term capital gains as well as long term capital gains. Balance loss, if any, shall be carried forward and set-off against any capital gains arising during subsequent eight assessment years. Also, as per section 70 of the Act r.w. section 74, long term capital loss arising during a year is allowed to be set-off only against long term capital gains. Balance loss, if any, shall be carried forward and set-off against long term capital gains arising during subsequent eight assessment years.

TAX BENEFITS AVAILABLE /CONSIDERATIONS APPLICABLE TO UNITHOLDERS OF THE TRUST

SPECIAL CONSIDERATIONS / BENEFITS APPLICABLE TO THE UNITHOLDERS OF THE TRUST:

Following tax benefit is specifically available to the unitholders of the Trust subject to the fulfilment of the conditions specified in the Act and SEBI Regulations:

Section 10(23FD) of the Act - Tax exemption in respect of income distributed by the Trust:

As per the provisions of section 115UA(1) of the Act, the income distributed by the Trust shall be deemed to be of the same nature and in the same proportion in the hands of the Unitholder as it had been received by or accrued to the business trust. However, as per sub-section 3A inserted in section 115UA by the Finance Act, 2023, w.e.f. 01.04.2024, the provisions of sub-section (1) shall not apply in respect of any sum referred to in clause (xii) of section 56(2), received by a unit holder from a business trust.

As per the provisions of section 10(23FD), any income referred to in section 115UA(1) of the Act and distributed by the Trust (except for that proportion of interest income referred in section 10(23FC)(a) of the Act or dividend received/receivable from an SPV referred to in section 10(23FC)(b) in a case where the SPV has exercised the option under section 115BAA; which is taxable under section 115UA(3) of the Act) shall not be included in the total income of the unit- holders.

The Finance Act, 2023 has inserted section 56(2)(xii) w.e.f. 01.04.2024 (i. e. AY 2024-25). The section provides that any specified sum received by unit holder from a business trust during the previous year, with respect to units

held by it at any time during the previous year will be taxable as "income from other sources". The section has introduced a computation methodology to ascertain "specified sum".
The specified sum is the aggregate of sum distributed [which is not in the nature of income u/s 10(23FC) or which is not chargeable to tax at level of business trust u/s 115UA(2)] by business trust in the previous year or during any earlier previous years to such unitholder who holds such unit on the date of distribution or to any other unit holder who held such unit at any time prior to the date of distribution, and reduced by amount at which such unit was issued by the business trust and further reduced by amount charged to tax u/s 56(2)(xii) in any earlier previous year.

The Finance Act has also introduced Explanation 1 and Explanation 2 in clause (ii) of section 48 w.e.f. AY 2024-25.
Explanation 1 provides that the cost of acquisition of a unit of business trust shall be reduced and shall be deemed to have always been reduced by any sum received by a unit holder from the business trust w.r.t. such unit, if the sum is-

- Not in the nature of income referred to in section 10(23FC)
- Not chargeable to tax u/s 56(2)(xii)
- Not chargeable to tax u/s 115UA(2)

Explanation 2 covers the situation where the transaction of transfer of a unit is not considered as transfer under section 47 and cost of acquisition of such unit is determined under section 49. It provides that sum received with respect to such unit before such transaction as well as after such transaction shall be reduced from the cost of acquisition. Thus, if an assessee has received unit of business trust under a transaction which is not regarded as 'transfer', the cost of acquisition of such unit shall be reduced by the sum received from the business trust by the assessee as well as the previous unit holder provided such sum is not chargeable to tax either in the hands of the assessee, the previous unit holder and the business trust.

There is no provision for withholding tax obligation to the business trust u/s 194LBA in relation to amount taxable u/s 56(2)(xii) unlike section 195, wherein the trust is liable to withhold tax u/s 195 on distributions to non-resident unitholders.

According to sec. 47(xvii), any transfer of a capital asset, being share of a special purpose vehicle to a business trust in exchange of units allotted by that trust to the transferor shall not be regarded as transfer and accordingly not be liable to capital gains tax.

According to sec. 49(2AC) the cost of units acquired in lieu of shares in SPV shall be deemed to be cost of acquisition of shares in SPV.

As per clause (hc) of explanation 1 of sec. 2(42A), for ascertaining the period of holding of such units, the period of holding of shares in SPV shall also be included.

Notional gain arising on transfer of share of special purpose vehicle to business trust in exchange of units allotted by that trust as referred u/s 47(xvii) or notional gain arising upon change in carrying amount of the units and realised gain on transfer of these units are to be excluded in calculation of book profits for the purposes of MAT u/s 115JB. (clause (iie)) to explanation 1 to section 115JB).

GENERAL BENEFITS AVAILABLE / CONSIDERATIONS APPLICABLE TO ALL UNITHOLDERS OF THE TRUST:

For resident Unitholder- Long-term capital gains:

Income arising on transfer of units of the Trust through a recognized stock exchange, on which STT is paid, shall be chargeable to tax in the hands of the Unitholders at a rate of 10% without indexation benefit (plus applicable surcharge and cess) under section 112A of the Act if the said units are long-term capital assets. The determinative period of holding for such units to qualify as long-term capital asset is more than 36 months. Income arising on transfer of units of the Trust that are long term capital assets, which is not through a recognized stock exchange and not subject to STT, shall be chargeable to tax at 20%, with indexation benefit (plus applicable surcharge and cess) under section 112 of the Act. In case of a Unitholder being an individual or HUF, where the total taxable income as reduced by long-term capital gains is below the basic exemption limit, the long-term capital gains will be reduced to the extent of the shortfall and only the balance long-term capital gains will be subjected to such tax in accordance with the proviso to clause (a) of sub-section (1) of section 112 of the Act.

For resident Unitholder- Short-term capital gains:

Short-term capital gains arising on transfer of the units of the Trust will be chargeable to tax at the rate of 15% (plus applicable surcharge and cess) as per the provisions of section 111A of the Act provided such transaction is subject to STT and through a recognized stock exchange. In case of a Unitholder being an individual or HUF, where the total taxable income as reduced by short-term capital gains is below the basic exemption limit, the short- term capital gains will be reduced to the extent of the shortfall and only the balance short- term capital gains will be subjected to such tax in accordance with the proviso to sub- section (1) of section 111A of the Act.

For resident Unitholder- Set-off of losses:

Short Term Capital Loss computed for the given year is allowed to be set-off against Short Term/ Long Term Capital Gains computed for the said year under section 70 of the Act. Balance loss, if any, shall be carried forward and set-off against any capital gains arising during subsequent eight assessment years. Also, as per section 70 of the Act, long term capital loss arising during a year is allowed to be set-off only against long term capital gains. Balance loss, if any, shall be carried forward and set-off against long term capital gains arising during subsequent eight assessment years.

For resident Unitholder- Deduction of Securities Transaction Tax:

Where the gains arising on the transfer of the units of the Trust are included in the business income of an assessee assessable under the head "Profits and Gains from Business or Profession" and on which securities transaction tax has been charged, such securities transaction tax shall be a deductible expense from business income as per the provisions of section 36(1)(xv) of the Act. The characterization of gains/ losses, arising from transfer of units, as capital gains or business income would depend on the nature of holding in the hands of the unitholders and various other factors.

Section 197 of the Act is amended to include reference to section 194LBA meaning thereby that the unit holder can make application to the assessing officer for obtaining certificate for lower or nil deduction of tax.

For non-resident Unitholder- Long-term capital gains:

Income arising on transfer of units of the Trust, shall be chargeable to tax in the hands of the Unitholders at a rate of 10% without indexation and forex fluctuation benefit (plus applicable surcharge and cess) under section 112A of the Act if the said units are long-term capital assets and transfer is through a recognized stock exchange and subject to STT. These assets turn long term if they are held for more than 36 months. Income arising on transfer of units of the Trust that are long term capital assets, which is not through a recognized stock exchange and not subject to STT, shall be chargeable to tax at 20%, with indexation benefit (plus applicable surcharge and cess) under section 112 of the Act.

For non-resident Unitholder- Short-term capital gains:

Short-term capital gains arising on transfer of the units of the Trust will be chargeable to tax at the rate of 15% (plus applicable surcharge and cess) as per the provisions of section 111A of the Act if such transaction is chargeable to STT.

For non-resident Unitholder- Set-off of losses:

Short Term Capital Loss computed for the given year is allowed to be set-off against Short Term/ Long Term Capital Gains computed for the said year under section 70 of the Act. Balance loss, if any, shall be carried forward and set-off against any capital gains arising during subsequent eight assessment years. Also, as per section 70 of the Act, long term capital loss arising during a year is allowed to be set-off only against long term capital gains. Balance loss, if any, shall be carried forward and set-off against long term capital gains arising during subsequent eight assessment years.

For non-resident Unitholder- Deduction of Securities Transaction Tax:

Where the gains arising on the transfer of units of the trust are included in the business income of an assessee assessable under the head "Profits and Gains from Business or Profession" and on which securities transaction tax has been charged, such securities transaction tax shall be a deductible expense from business income as per the provisions of section 36(1)(xv) of the Act.

For non-resident Unitholder- Benefits under Double Taxation Avoidance Agreements:

Under the provisions of section 90(2) of the Act, a non-resident will be governed by the provisions of the Double Tax Avoidance Agreement (DTAA) between India and the country of tax residence of the non-resident and the provisions of the Act apply to the extent they are more beneficial to the assessee.

As per explanation 4 to section 115JB(2), the provisions of section 115JB shall not be applicable to a foreign company if the foreign company is a resident of a country having DTAA with India and such foreign company does not have a permanent establishment within the definition of the term in the relevant DTAA, or the foreign company is a resident of a country which does not have a DTAA with India and such foreign company is not required to seek registration under section 592 of the Companies Act 1956 or section 380 of the Companies Act 2013.

For non-resident Unitholder- Section 194LBA – Tax Deduction on certain income from units of the Trust:

Where any distributed income referred in section 115UA, is in the nature referred to in clause (23FC) of section 10 payable by the Trust to its unit holder being a non-resident unit holder, then the same shall be subjected to the tax deduction at the rate of 5% in case of income of the nature referred to in sub-clause (a) [interest income] and 10% in case of income of the nature referred to in sub-clause (b) [dividend income] of clause (23FC) of section 10 (plus applicable surcharge and cess). However, in view of section 90(2) of the Act, a non-resident will be governed by the provisions of the Agreement for Avoidance of Double Taxation (AADT) between India and the country of tax residence of the non-resident and the provisions of the Act apply to the extent they are more beneficial to the assessee.

Section 197 of the Act is amended to include reference to section 194LBA meaning thereby that the unit holder can make application to the assessing officer for obtaining certificate for lower or nil deduction of tax.

For unitholders who are Foreign Portfolio Investors ('FPIs')/ Foreign Institutional Investors ('FIIs'):

As per section 2(14) of the Act, any securities held by a FII which has invested in such securities in accordance with the regulations made under the Securities and Exchange Board of India Act, 1992 shall be deemed to be treated as Capital asset. As per section 196D, no tax is to be deducted from any income, by way of capital gains arising from the transfer of units, payable to Foreign Institutional Investor. In respect of non- residents, the tax rates and consequent taxation mentioned above will be further subject to any benefits available under the Tax Treaty, if any, between India and the country in which the FPI/FII has Fiscal domicile. As per the provisions of section 90(2) of the Act, the provisions of the Act would prevail over the provisions of the Tax Treaty to the extent they are more beneficial to the FII.

Pursuant to Central Board of Direct Tax press release dated 24 September 2015, the Government has clarified the inapplicability of Minimum Alternate Tax provisions to FIIs/FPIs.

For unit holders who are Sovereign Wealth Funds:

Under section 10(23FE) of the Act, any income of Sovereign Wealth Fund in the nature of dividend, interest, specified sum referred to in section 56(2)(xii) or long-term capital gains arising from an investment made by it in Business Trust in India is exempt from tax provided such investment is made before 31st March, 2024 and is held for at least three years.

However, the said exemption is not available if a sovereign wealth fund has loans or borrowings, directly or indirectly, for the purpose of making the investment in India.

The exemption would be applicable to a sovereign wealth fund which satisfies stipulated conditions mentioned in Explanation 1 to section 10(23FE) and is notified by the Central Government.

For unitholders who are Mutual Funds:

Under section 10(23D) of the Act, any income earned by a Mutual Fund registered under the Securities and Exchange Board of India Act, 1992, or a Mutual Fund set up by a public sector bank or a public financial institution, or a Mutual Fund authorized by the Reserve Bank of India would be exempt from income-tax, subject to such conditions as the Central Government may by notification in the Official Gazette specify in this behalf.

The Trust is not required to withhold tax on interest payment to Mutual Fund set up under section 10(23D) of the Act.

The above statement of possible direct tax benefits sets out the provisions of law in a summary manner only and is not a complete analysis or listing of all potential tax consequences of the purchase, ownership and disposal of shares and units.

The stated benefits will be available only to the sole/ first named holder in case the units are held by joint holders.

In respect of non-residents, the tax rates and the consequent taxation mentioned above shall be further subject to any benefits available under the applicable DTAA, if any, between India and the country in which the non-resident has fiscal domicile.

SECTION IV – ABOUT THE TRUST

BACKGROUND AND STRUCTURE OF THE TRUST

Background of the Trust

The Trust has been settled by the Sponsor as an irrevocable trust under the provisions of the Trusts Act in New Delhi, India pursuant to the Indenture of Trust dated August 27, 2019, as amended. The Indenture of Trust is registered under the Registration Act. The Trust is registered with the SEBI as an infrastructure investment trust under the InvIT Regulations. The Units of the Trust are listed on the NSE.

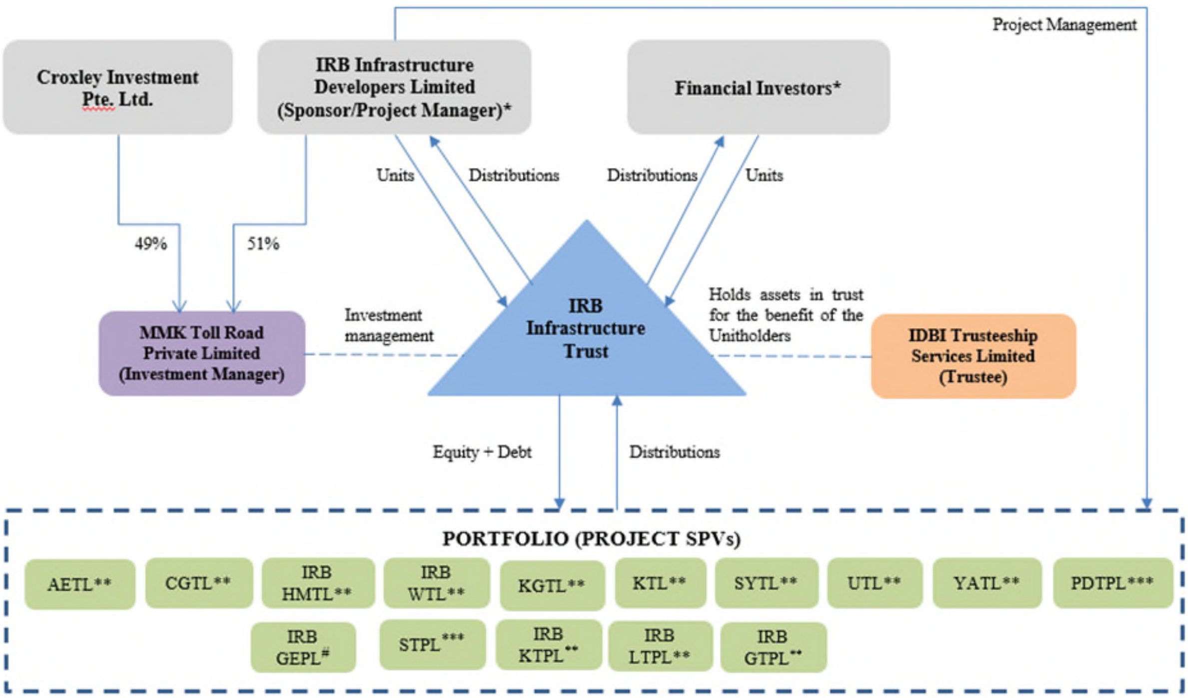
The object and purpose of the Trust, as described in the Indenture of Trust, is to carry on the activity of an infrastructure investment trust under the InvIT Regulations. Investment by the Trust shall only be in holding companies, SPVs, infrastructure projects, securities in India or other permitted investments in accordance with the InvIT Regulations, the investment strategy and the Trust Documents. The principal investment objective of the Trust is to own, operate and invest in infrastructure projects in India, directly or through holding companies or SPVs and make other investments and undertake such activities in such jurisdictions as may be permissible under the InvIT Regulations, other applicable law and the Trust Documents. For further details in relation to the business and investment strategy of the Trust, see "*Business*" on page 124.

The Trust is required to make distributions to the Unitholders in accordance with the InvIT Regulations and the Distribution Policy. For details in relation to the distribution policy of the Trust, see "*Distributions*" on page 303.

Parties to the Trust and Structure of the Trust

In accordance with the InvIT Regulations, the Parties to the Trust are (i) the Sponsor; (ii) the Investment Manager; (iii) the Trustee; and (iv) the Project Manager. For details, see "*The Sponsor and Project Manager*", "*The Investment Manager*" and "*The Trustee*" on pages 313, 317 and 325, respectively.

The following diagram illustrates the relationship among the Trust, the Project SPVs in the Portfolio, the Trustee, the Investment Manager and the Unitholders (which includes the Sponsor) as on the date of this Letter of Offer:



* *Unitholders of the Trust*

***100% of each Project SPV held by the Trust, together with nominee shareholders*

****99.96% of PDTPL and STPL held by the Trust, with the Sponsor and the Sponsor's nominee shareholders holding the remaining 0.04%*

#*99.99% of IRB GEPL held by the Trust, with the Sponsor and the Sponsor's nominee shareholders holding less than 0.01%*

Details of the Project SPVs

1. AETL

Corporate Information

AETL was incorporated on July 21, 2015 as a private limited company under the Companies Act, 1956, having CIN U45209MH2015PTC266741. AETL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45209MH2015PLC266741. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of AETL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Six Laning of Agra to Etawah Bypass section of NH-2 from km 199.660 to km 323.525 in the State of Uttar Pradesh under NHDP Phase V on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of AETL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	436,500,000
Issued, subscribed and paid-up capital	436,500,000

Shareholding Pattern

The shareholding pattern of AETL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	436,499,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Shailesh Joshi**	1	Negligible
6.	Nikhil Maniar**	1	Negligible
7.	Anushree Joshi**	1	Negligible
Total		**436,500,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

2. CGTL

Corporate Information

CGTL was incorporated on October 18, 2016 as a private limited company under the Companies Act, having CIN U45200MH2016PTC286895. CGTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45200MH2016PLC286895. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of CGTL, is as follows:

"To carry on the business of infrastructure development in respect of the work of Design, Build, Finance, and Operation of Six Laning of Kishangarh Udaipur Ahmedabad Section from km 90.000 (near Gulabpura) to km 214.870 (end of Chittorgarh Bypass) of NH-79 in the State of Rajasthan Package-2 under NHDP Phase – V on BOT(Toll) mode, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI)."

Capital Structure

The capital structure of CGTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	203,500,000
Issued, subscribed and paid-up capital	203,500,000

Shareholding Pattern

The shareholding pattern of CGTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	203,499,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Shailesh Joshi**	1	Negligible
6.	Nikhil Maniar**	1	Negligible
7.	Vinod Kumar Menon**	1	Negligible
Total		**203,500,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

3. IRB HMTL

Corporate Information

IRB HMTL was incorporated on April 18, 2018 as a private limited company under the Companies Act, having CIN U45400MH2018PTC308187. IRB HMTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45400MH2018PLC308187. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of IRB HMTL, is as follows:

"To carry on the business of infrastructure development in respect of Six Laning of Hapur bypass to Moradabad Section including Hapur bypass from Km 50.000 (Design Chainage 50.000) to Km 148.277 (Design Chainage 149.867) of NH-24 (New NH-9) in the State of Uttar Pradesh under NHDP Phase V (Bharatmala Pariyojna) on DBFOT (Toll) mode, including collection and retention of the toll of fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI)."

Capital Structure

The capital structure of IRB HMTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	375,000,000
Issued, subscribed and paid-up capital	371,500,000

Shareholding Pattern

The shareholding pattern of IRB HMTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	371,499,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Shailesh Joshi**	1	Negligible
6.	Nikhil Maniar**	1	Negligible
7.	Vinod Kumar Menon**	1	Negligible
Total		**371,500,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

4. IRB WTL

Corporate Information

IRB WTL was incorporated on August 22, 2012 as a private limited company under the Companies Act, 1956, having CIN U45400MH2012PTC234786. IRB WTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45400MH2012PLC234786. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of IRB WTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance, and Operation of Four Laning of Goa/Karnataka border to Kundapur section of NH-17 from existing km 93.700 to km 283.300 in the State of Karnataka under NHDP Phase IV on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis, inclding collection and retention of toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of IRB WTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	174,194,303
Issued, subscribed and paid-up capital	174,194,303

Shareholding Pattern

The shareholding pattern of IRB WTL is as follows:

S No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	174,194,297	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Shailesh Joshi**	1	Negligible
5.	Nikhil Maniar**	1	Negligible
6.	Arati Taskar**	1	Negligible
7.	Anushree Joshi**	1	Negligible
Total		**174,194,303**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

5. KGTL

Corporate Information

KGTL was incorporated on January 12, 2017 as a private limited company under the Companies Act, having CIN U45203MH2017PTC289501. KGTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 14, 2019 was issued, having CIN U45203MH2017PLC289501. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of KGTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Six Laning of Kishangarh to Gulabpura Section of NH 79A and NH 79 in the state of Rajasthan (length 90.000 km) under NHDP Phase V package – I on DBFOT (Toll) mode, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of KGTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	155,500,000
Issued, subscribed and paid-up capital	155,500,000

Shareholding Pattern

The shareholding pattern of KGTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	155,499,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Arati Taskar **	1	Negligible
5.	Shailesh Joshi**	1	Negligible
6.	Nikhil Maniar**	1	Negligible
7.	Vinod Kumar Menon**	1	Negligible
Total		155,500,000	**100**

** On behalf of the Trust*

** *As a nominee of the Trust*

6. KTL

Corporate Information

KTL was incorporated on June 11, 2014 as a private limited company under the Companies Act, having CIN U45201MH2014PTC255454. KTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 14, 2019 was issued, having CIN U45201MH2014PLC255454. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of KTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Four Laning of Kaithal to Rajasthan Border section of NH-152/65 from km 33+250 (Design Km – 0.500) to km 241+580 (Design Km 165.759) in the State of Haryana under NHDP Phase IV on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of KTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	328,000,000
Issued, subscribed and paid-up capital	328,000,000

Shareholding Pattern

The shareholding pattern of KTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	327,999,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Shailesh Joshi**	1	Negligible
6.	Nikhil Maniar**	1	Negligible
7.	Anushree Joshi*	1	Negligible
Total		**328,000,000**	**100**

* *On behalf of the Trust*
** *As a nominee of the Trust*

7. SYTL

Corporate Information

SYTL was incorporated on January 10, 2014 as a private limited company under the Companies Act, 1956, having CIN U45400MH2014PTC251983. SYTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45400MH2014PLC251983. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of SYTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Four Laning of Solapur to Yedeshi section of NH-211 from km 0.000 to km 100.000 (Design Length 98.717 km) in the State of Maharashtra under NHDP Phase IV on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of SYTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	98,250,000
Issued, subscribed and paid-up capital	98,250,000

Shareholding Pattern

The shareholding pattern of SYTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	98,249,994	100
2.	Dhananjay K. Joshi**	1	Negligible
3.	Mahesh Kavthekar**	1	Negligible
4.	Shailesh Joshi**	1	Negligible
5.	Nikhil Maniar**	1	Negligible
6.	Arati Taskar**	1	Negligible
7.	Anushree Joshi**	1	Negligible
Total		**98,250,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

8. UTL

Corporate Information

UTL was incorporated on October 6, 2016 as a private limited company under the Companies Act, having CIN U45203MH2016PTC286600. UTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45203MH2016PLC286600. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of UTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Six Lanning from km 287.400 to km 401.200 section of NH-8 in the States of Rajasthan and Gujarat (approx. length 113.800 km) on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis under NHDP Phase V (package – V), including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of UTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	116,800,000
Issued, subscribed and paid-up capital	116,800,000

Shareholding Pattern

The shareholding pattern of UTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	116,799,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Shailesh Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Dhananjay K. Joshi**	1	Negligible
6.	Vinod Kumar Menon**	1	Negligible
7.	Nikhil Maniar**	1	Negligible
Total		**116,800,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

9. YATL

Corporate Information

YATL was incorporated on May 17, 2014, as a private limited company under the Companies Act, 2013, having CIN U45300MH2014PTC255280. YATL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45300MH2014PLC255280. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of YATL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Four Laning of Yedeshi to Aurangabad section of NH-211 from km 100.000 to km 290.200 in the State of Maharashtra under NHDP Phase IVB on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis, including collection and retention of the toll or free and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be excuted with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of YATL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	216,000,000
Issued, subscribed and paid-up capital	215,757,001

Shareholding Pattern

The shareholding pattern of YATL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	215,756,995	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Shailesh Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Dhananjay K. Joshi**	1	Negligible
6.	Anushree Joshi**	1	Negligible
7.	Nikhil Maniar**	1	Negligible
	Total	**215,757,001**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

10. PDTPL

Corporate Information

PDTPL was incorporated on April 15, 2021, as a private limited company under the Companies Act, 2013, having CIN U45201MH2021PTC359020. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of PDTPL, is as follows:

"To carry on the business of infrastructure development in respect of 6 Laning of National Corridor NH-19 from Palsit to Dankuni (up to NH-6 Connector) from km. 588.870 to km. 652.700 (total design length 63.830 km) in the State of West Bengal under Bharatmala Pariyojana to be executed on BOT (Toll) basis Project including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI)."

Capital Structure

The capital structure of PDTPL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	121,250,000
Issued, subscribed and paid-up capital	121,250,000

Shareholding Pattern

The shareholding pattern of PDTPL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	121,200,000	99.96
2.	IRB Infrastructure Developers Limited	49,994	0.04
3.	Rajpaul Sharma**	1	Negligible
4.	Vinod Kumar Menon**	1	Negligible
5.	Amitabh Murarka**	1	Negligible
6.	Dhananjay K. Joshi**	1	Negligible
7.	Arati Taskar**	1	Negligible
8.	Anushree Joshi**	1	Negligible
	Total	**121,250,000**	**100**

** On behalf of the Trust*

*** As a nominee of IRB Infrastructure Developers Limited*

11. IRB GEPL

Corporate Information

IRB GEPL was incorporated on May 13, 2023, as a private limited company under the Companies Act, 2013, having CIN U42101TS2023PTC182805. Its registered office is situated at Plot No. 33, Sai Villa, Near Umda Nagar Railway Station, Shamshabad, K.V.Rangareddy, Rangareddy, Telangana, India, 501218.

Main Object

The main object, as contained in the memorandum of association of IRB GEPL, is as follows:

"To carry on the business of infrastructure development in respect of Tolling, Operation, Maintenance and Transfer (TOT) of Nehru Outer Ring Road (from Km. 0+000 to Km. 158+000 in Hyderabad, Telangana and to carry out the ancillary activities, including collection and retention of the toll or fee, as specified in the Concession Agreement to be executed with Hyderabad Metropolitan Development Authority (HMDA / Authority) and/or the Hyderabad Growth Corridor Limited (HGCL / Implementing Authority)."

Capital Structure

The capital structure of IRB GEPL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	717,000,000
Issued, subscribed and paid-up capital	715,500,000

Shareholding Pattern

The shareholding pattern of IRB GEPL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	715,450,000	99.99
2.	IRB Infrastructure Developers Limited	49,994	Less than 0.01
3.	Rajpaul Sharma**	1	Negligible
4.	Nikhil Maniar**	1	Negligible
5.	Amitabh Murarka**	1	Negligible
6.	Dhananjay K. Joshi**	1	Negligible
7.	Shailesh Joshi**	1	Negligible
8.	Mahesh Kavthekar**	1	Negligible
Total		**715,500,000**	**100**

** On behalf of the Trust*
*** As a nominee of IRB Infrastructure Developers Limited*

12. STPL

Corporate Information

STPL was incorporated on March 14, 2023, as a private limited company under the Companies Act, 2013, having CIN U42101MH2023PTC398913. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of STPL, is as follows:

"To carry on the business of infrastructure development in respect of Upgradation to Six Lane with paved Shoulder of NH-27 from Samakhiyali to Santalpur section from km. 339+200 to Km. 430+100 in the State of Gujarat to be executed on BOT (Toll) Mode, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI)"

Capital Structure

The capital structure of STPL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	215,000,000
Issued, subscribed and paid-up capital	116,250,000

Shareholding Pattern

The shareholding pattern of STPL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	116,200,000	99.96
2.	IRB Infrastructure Developers Limited	49,994	0.04
3.	Rajpaul Sharma**	1	Negligible
4.	Vinod Kumar Menon**	1	Negligible
5.	Amitabh Murarka**	1	Negligible
6.	Dhananjay K. Joshi**	1	Negligible
7.	Arati Taskar**	1	Negligible
8.	Anushree Joshi**	1	Negligible
	Total	**116,250,000**	**100**

** On behalf of the Trust*
*** As a nominee of IRB Infrastructure Developers Limited*

13. IRB LTPL

Corporate Information

IRB LTPL was incorporated on November 10, 2023, as a private limited company under the Companies Act, 2013, having CIN U42101MH2023PTC413666. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of IRB LTPL, is as follows:

"*To carry on the business of infrastructure development in respect of the Tolling, Operation, Maintenance and Transfer (TOT) of four lane Lalitpur-Sagar-Lakhnadon section from km.99.005 to km 415.089 of NH - 26 (New NH-44) in the state of Uttar Pradesh and Madhya Pradesh [TOT Bundle-12] and to carry out the ancillary activities, including collection and retention of the toll or fee, as specified in the Concession Agreement to be executed with National Highway Authority of India (NHAI).*"

Capital Structure

The capital structure of IRB LTPL as of the date of this Letter of Offer is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	425,000,000

Particulars	No. of equity shares of face value of ₹10 each
Issued, subscribed and paid-up capital	50,000

Shareholding Pattern

The shareholding pattern of IRB LTPL as of the date of this Letter of Offer is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	49,999	99.99
2.	Amitabh Murarka**	1	Negligible
Total		**50,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

14. IRB KTPL

Corporate Information

IRB KTPL was incorporated on January 1, 2024, as a private limited company under the Companies Act, 2013, having CIN U42101MH2024PTC416512. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of IRB KTPL, is as follows:

"To carry on the business of infrastructure development in respect of the Tolling, Operation, Maintenance and Transfer (TOT) of Kota Bypass and Cable Stay Bridge on NH-76 (New NH-27) in the state of Rajasthan [TOT Bundle-13] and to carry out the ancillary activities, including collection and retention of the toll or fee, as specified in the Concession Agreement to be executed with National Highway Authority of India (NHAI)."

Capital Structure

The capital structure of IRB KTPL as of the date of this Letter of Offer is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	45,000,000
Issued, subscribed and paid-up capital	50,000

Shareholding Pattern

The shareholding pattern of IRB KTPL as of the date of this Letter of Offer is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	49,999	99.99
2.	Amitabh Murarka**	1	Negligible
Total		**50,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

15. IRB GTPL

Corporate Information

IRB GTPL was incorporated on January 1, 2024, as a private limited company under the Companies Act, 2013, having CIN U42101MH2024PTC416522. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of IRB GTPL, is as follows:

"*To carry on the business of infrastructure development in respect of the Tolling, Operation, Maintenance and Transfer of Gwalior-Jhansi section from km 0.00 to km 103.000 (revised section Km. 16.000 to Km. 98.455) of NH75 (New NH-44) in the State of Madhya Pradesh and Uttar Pradesh [TOT Bundle-13] and to carry out the ancillary activities, including collection and retention of the toll or fee, as specified in the Concession Agreement to be executed with National Highway Authority of India (NHAI).*"

Capital Structure

The capital structure of IRB GTPL as of the date of this Letter of Offer is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	115,000,000
Issued, subscribed and paid-up capital	50,000

Shareholding Pattern

The shareholding pattern of IRB GTPL as of the date of this Letter of Offer is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	49,999	99.99
2.	Amitabh Murarka**	1	Negligible
Total		**50,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

Investment in IRB LTPL, IRB GTPL and IRB KTPL

The Trust intends to (i) invest in IRB LTPL through subscription to 420,530,000 equity shares of IRB LTPL; (ii) invest in IRB GTPL through subscription to 103,235,000 equity shares of IRB GTPL; and (iii) invest in IRB KTPL through subscription to 39,297,500 equity shares of IRB KTPL. A portion of the proceeds of the Issue will be utilized to subscribe to the equity shares of IRB LTPL, IRB GTPL and IRB KTPL.

The Trustee (on behalf of the Trust) and the Investment Manager have entered into (i) the IRB LTPL Share Subscription Agreement with IRB LTPL; (ii) the IRB GTPL Share Subscription Agreement with IRB GTPL; and (iii) the IRB KTPL Share Subscription Agreement with IRB KTPL, each dated March 13, 2024. For a summary of the key terms of the IRB LTPL Share Subscription Agreement, the IRB GTPL Share Subscription Agreement and the IRB KTPL Share Subscription Agreement, see "*Objects of the Issue – Details of Utilization of Issue Proceeds*" on page 69.

In connection with the investment in IRB LTPL, IRB GTPL and IRB KTPL, the Sponsor, the Investment Manager, the Financial Investors and Croxley have also entered into an amendment to the Framework Agreement dated

March 13, 2024 to record the terms and conditions in relation to, *inter-alia*, investment into the Trust for funding the completion of the projects of these SPVs. For details, see " – *Certain Agreements in relation to the Trust – Framework Agreement*" below.

The Trustee (on behalf of the Trust) and the Investment Manager have also entered into (i) IRB LTPL Shareholder Loan Agreement with IRB LTPL; (ii) IRB GTPL Shareholder Loan Agreement with IRB GTPL and (iii) IRB KTPL Shareholder Loan Agreement with IRB KTPL, each dated March 13, 2024 to provide shareholder loans to such Project SPVs. For details, see "*Objects of the Issue – Details of Utilization of Issue Proceeds*" on page 69.

Further, the Trustee (on behalf of the Trust), the Investment Manager and the Sponsor have entered into the IRB LTPL Project Implementaion Agreement with IRB LTPL, the IRB KTPL Project Implementation Agreement with IRB KTPL and the IRB GTPL Project Implementation Agreement with IRB GTPL with respect to the projects of such Project SPVs under the InvIT Regulations. For details, see "*The Sponsor and Project Manager – Functions, Duties and Responsibilities of the Project Manager*" on page 314.

The Trustee (on behalf of the Trust), the Investment Manager, the Sponsor and the Project SPVs have entered into an amendment agreement to the Name Licensing Agreement, which will be effective from the date of the closing date under (i) the IRB LTPL Share Subscription Agreement with respect to IRB LTPL; (ii) the IRB GTPL Share Subscription Agreement with respect to IRB GTPL; and (iii) the IRB KTPL Share Subscription Agreement with respect to IRB KTPL. For details, see "*Business – Intellectual Property*" on page 157.

Certain Agreements in relation to the Trust

Framework Agreement

The Sponsor, the Investment Manager, the Financial Investors and Croxley have entered into the Framework Agreement to record the terms and conditions in relation to, *inter-alia*, subsequent investment into the Trust by the Sponsor and further funding for completion of the projects of the Project SPVs. The Cintra InvIT Investor has executed an amendment agreement to the Framework Agreement with the other parties to the Framework Agreement, which will become effective upon the closing of the Cintra Transaction. Closing of the Cintra Transaction is subject to the receipt of requisite regulatory approvals. The promoter of the Sponsor has also provided undertakings in relation to his shareholding in the Sponsor and other matters.

Pursuant to the terms of the Framework Agreement and the Share Purchase Agreements, the Portfolio was acquired by the Trust. Further, the Sponsor, Croxley and the Investment Manager entered into the IM SHA in connection with Croxley's investment in the Investment Manager. The Cintra IM Investor has entered into an amendment agreement to the IM SHA with the other parties to the IM SHA, which will become effective upon the closing of the Cintra Transaction. Closing of the Cintra Transaction is subject to the receipt of requisite regulatory approvals.

See "*Corporate Governance*" and "*The Investment Manager*" on pages 159 and 317, respectively, for details of the arrangements under these agreements.

A summary of the key provisions of the Framework Agreement as of the date of this Letter of Offer is set out below.

Covenants

The Sponsor has provided covenants and undertakings to the Financial Investors in relation to certain matters under the Framework Agreement. These include, *inter-alia*:

- *Correspondence and regulatory filings:* other than routine or annual filings made by the Manager Group Member with the SEBI or the RBI, regulatory correspondence and filings between the Trustee or Manager Group Member and the SEBI or RBI as specified in the Framework Agreement require the prior written consent of the Financial Investors;

- *Project management works*: the Sponsor will act as the Project Manager in accordance with the terms of the Project Implementation Agreements and provide operation and maintenance services for a period of at least 10 years under the Project Implementation Agreements. For further details, see "*Background and Structure* *of the Trust – Fees and Expenses – Fees and expenses of the Project Manager*" and "*The Sponsor and Project Manager*" on pages 116 and 313, respectively;

- *Sponsor categorization*: Unless otherwise agreed by the parties, the Sponsor will continue to act as a sponsor of the Trust so long as the Sponsor and/or its affiliates hold Units and shall fulfil the obligations of a sponsor under the InvIT Regulations; and

- *Right of first offer in relation to the IRB InvIT Fund:* the Sponsor has agreed to provide the Financial Investors a right of first offer over any units of the IRB InvIT Fund held by the Sponsor and its affiliates and proposed to be transferred by them to any person (other than the entities controlled by the Sponsor or its subsidiaries) at any time after the closing date.

In addition, the Sponsor has also undertaken to comply with provisions in relation to material contracts, business plans, policies and initial tax orders and ensure certain information rights. Upon the Project SPVs achieving completion of the projects as required under the relevant concession agreements, the Sponsor has undertaken to ensure that no more than 51% of the equity shares (on a fully diluted basis) of all the Project SPVs will be encumbered in favor of the lenders and/or a debenture trustee.

Additional covenants in relation to the investment in IRB LTPL, IRB GTPL and IRB KTPL

The Investment Manager has provided certain additional covenants and undertakings to the Financial Investors in relation to IRB LTPL, IRB GTPL and IRB KTPL under the Framework Agreement. These include, *inter-alia*, that IRB LTPL, IRB GTPL and IRB KTPL are not permitted to engage any employees, consultants, contract laborers or workers (howsoever categorized, except external professional advisors) without the prior written consent of the Financial Investors.

The Trust has undertaken to ensure that the proceeds of the Issue are utlilized solely for funding of the total project cost of IRB LTPL project, IRB GTPL project and IRB KTPL project, respectively, and failing which the parties have agreed to certain arrangements in relation to dealing with the proceeds of the Issue.

Conditions precedent in relation to the investment in IRB LTPL, IRB GTPL and IRB KTPL

The obligations of the parties to complete the investment in IRB LTPL, IRB GTPL and IRB KTPL is subject to the fulfilment of certain conditions on or before the Closing Date, to the satisfaction of the Financial Investors, unless waived or deferred in writing by the Financial Investors at their sole discretion, which, *inter-alia*, include:

- the IRB LTPL transaction documents (except the IRB LTPL Project Implementation Agreement), the IRB KTPL transaction documents (except the IRB KTPL Project Implementation Agreement) and the IRB GTPL transaction documents (except the IRB GTPL Project Implementation Agreement), in agreed form, shall have been duly executed by the parties thereunder;
- no governmental authority of competent jurisdiction shall have enacted, issued, promulgated or enforced any applicable law that prohibits or makes illegal the consummation of the transactions contemplated under of the IRB LTPL transaction documents, the IRB KTPL transaction documents or the IRB GTPL transaction documents.
- IRB LTPL, IRB KTPL and IRB GTPL shall have obtained all necessary consents in connection with the execution of the IRB LTPL transaction documents, IRB KTPL transaction documents and IRB GTPL transaction documents, respectively, and the completion of the transactions contemplated thereunder.
- the warranties provided by the Investment Manager under the Framework Agreement and/or under the other IRB LTPL transaction documents, IRB KTPL transaction documents or IRB GTPL transaction documents (as applicable) are true, accurate and complete as of the execution date and as of each of the IRB LTPL closing date, IRB KTPL closing date and IRB GTPL closing date, respectively (except those representations and warranties that address matters only as of a specified date, which shall be true and correct as of that specified date).
- the business plan and the annual budget with respect to each of IRB LTPL, IRB KTPL and IRB GTPL shall be in agreed form.
- no IRB LTPL material adverse change, IRB KTPL material adverse change or IRB GTPL material adverse change shall be subsisting as on the IRB LTPL closing date, IRB KTPL closing date and IRB GTPL closing date, respectively.
- the conditions precedent under all other IRB LTPL transaction documents, IRB KTPL transaction documents and IRB GTPL transaction documents shall be completed in a manner acceptable to the

relevant parties thereunder.

- the Investment Manager (on behalf of the Trust) and IRB LTPL, IRB KTPL and IRB GTPL (as applicable) shall have duly performed and complied in all respects with all agreements, covenants and conditions required by the IRB LTPL transaction documents, IRB KTPL transaction documents and IRB GTPL transaction documents (as applicable) to be performed or complied with by them prior to or on the IRB LTPL closing date, the IRB KTPL closing date and IRB GTPL closing date, respectively.
- the parties shall have received a certificate, dated each of the IRB LTPL closing date, IRB KTPL closing date and IRB GTPL closing date and signed by a duly authorized officer of the Investment Manager, that the conditions precedent have been satisfied in the prescribed format.

Representations and warranties in relation to the investment in IRB LTPL, IRB GTPL and IRB KTPL

The Sponsor has provided representations and warranties in relation to, *inter-alia*, the organization, status and authority of each of IRB LTPL, IRB GTPL and IRB KTPL, the capital structure and shareholding of each of IRB LTPL, IRB GTPL and IRB KTPL, no conduct of business by each of IRB LTPL, IRB GTPL and IRB KTPL until the closing date, and no conflict with other obligations of each of IRB LTPL, IRB GTPL and IRB KTPL.

The Financial Investors and Croxley have provided representations and warranties in relation to their incorporation, existence, authority to enter into the agreement, eligibility to undertake the transactions under the agreement and no conflicts.

Reserved Matters

For details of Reserved Matters, see "*Rights of Unitholders – Approval of Unitholders – Reserved Matters*" on page 309.

Further funding in relation to the Portfolio

The Financial Investors have agreed to contribute a portion of the total equity commitment required for completion of the project of each Project SPV (the "**Project SPV Commitment**") in accordance with the business plan and the annual budget as set out in the Framework Agreement. Such contribution is proposed to be through subscription to additional Units on a periodic basis. In the first instance, the internal accruals of the relevant Project SPVs for the relevant period will be applied towards the Project SPV Commitment in such period, and any shortfall or excess as per the forecasts in the business plan will be adjusted towards the Project SPV Commitment requirements in the subsequent period. The Sponsor and the Financial Investors will together invest the required funding into the Trust in an agreed proportion.

The Financial Investors, the Sponsor and the Investment Manager have also agreed that the very next primary issuance of Units by the Trust after the Issue will be undertaken in a manner such that upon completion of the such issuance, the Sponsor holds 51% of the Units of the Trust and the Financial Investors (along with their transferees, if any) cumulatively hold the remaining 49% Units of the Trust.

Potential Projects

For details in relation to Potential Projects, see "*Related Party Transactions – Details of Related Party Transactions proposed to be undertaken*" on page 296.

Further issue of Units, transfer of Units and rights in relation to Unitholding

For details of arrangements agreed in relation to further issue of Units, transfer of Units and rights in relation to Unitholding, see "*Rights of Unitholders – Arrangements between the Sponsor and the Financial Investors*" on page 307.

Event of Default

For details of events of default and consequences, see "*Rights of Unitholders – Arrangements between the Sponsor and the Financial Investors – Events of Default and Consequences*" on page 307.

Indemnification in relation to the Formation Transactions

In relation to the Formation Transactions, the Sponsor has agreed to indemnify the Indemnified Parties (i.e., (a) the Financial Investors, their respective affiliates, their respective directors, officers, employees; and (b) at the option of the Financial Investors, any Manager Group Member, provided the Sponsor agrees to indemnify the relevant Manager Group Member of the entire loss suffered/ incurred by such Manager Group Member in relation to an indemnity event) against, any losses incurred or sustained by, or imposed upon, the Indemnified Parties based upon, arising out of, with respect to or relating to: (i) breach or inaccuracy of any of the Sponsor's warranties; (ii) any non-fulfilment, non-performance or other breach of any covenant or obligation of the Sponsor, its affiliates and/or any Manager Group Member contained in the transaction documents; (iii) any matter involving fraud, gross negligence or wilful misconduct by the Sponsor or any Manager Group Member; and (iv) certain specific indemnity matters.

The Sponsor's indemnification obligations are subject to certain limitations as to time and quantum as specified in the Framework Agreement. Further, the indemnified parties will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments by the Sponsor in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the indemnified party in respect of any such claim. Subject to the limitations set out in the Framework Agreement, the Sponsor's liability for all monetary claims for breach of warranties, including claims for damages, will not exceed a specified amount agreed under the Framework Agreement.

Indemnification in relation to the acquisition of PDTPL

In relation to the acquisition of PDTPL by the Trust, the Sponsor has agreed to indemnify the Indemnified Parties against, any losses incurred or sustained by, or imposed upon, the Indemnified Parties based upon, arising out of, with respect to or relating to: (i) any claim against PDTPL that has occurred prior to the PDTPL closing date; (ii) breach or inaccuracy of any of the Sponsor's warranties in relation to PDTPL; (iii) any non-fulfilment, non-performance or other breach of any covenant or obligation of the Sponsor, its affiliates and/or any Manager Group Member contained in the PDTPL transaction documents; and (iv) any matter involving fraud, gross negligence or wilful misconduct by the Sponsor, the Investment Manager or PDTPL.

The Sponsor's indemnification obligations are subject to certain limitations as to quantum as specified in the Framework Agreement. Further, the indemnified parties will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments by the Sponsor in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the indemnified party in respect of any such claim. Subject to the limitations set out in the Framework Agreement, the Sponsor's liability for all monetary claims for breach of warranties, in relation to the acquisition of PDTPL, including claims for damages, will not exceed a specified amount agreed under the Framework Agreement.

Indemnification in relation to the acquisition of IRB GEPL

In relation to the acquisition of IRB GEPL by the Trust, the Sponsor has agreed to indemnify the indemnified parties against, any losses incurred or sustained by, or imposed upon, the indemnified parties based upon, arising out of, with respect to or relating to: (i) any claim against IRB GEPL that has occurred prior to the IRB GEPL closing date; (ii) breach or inaccuracy of any of the Sponsor's warranties in relation to IRB GEPL; (iii) any non-fulfilment, non-performance or other breach of any covenant or obligation of the Sponsor, its affiliates and/or any Manager Group Member contained in the IRB GEPL transaction documents; (iv) any matter involving fraud, gross negligence or wilful misconduct by the Sponsor, the Investment Manager or IRB GEPL; and (v) certain other matters subject to and in accordance with the terms of the Framework Agreement.

Except in certain specified cases, the Sponsor's indemnification obligations are subject to certain limitations as to quantum as specified in the Framework Agreement. Further, the indemnified parties will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments by the Sponsor in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the indemnified party in respect of any such claim. Subject to the limitations and carve-outs set out in the Framework Agreement, the Sponsor's liability for all monetary claims for breach of warranties in relation to the acquisition of IRB GEPL by the Trust, including claims for damages, will not exceed a specified amount agreed under the Framework Agreement.

Indemnification in relation to the acquisition of STPL

In relation to the acquisition of STPL by the Trust, the Sponsor has agreed to indemnify the indemnified parties against, any losses incurred or sustained by, or imposed upon, the indemnified parties based upon, arising out of, with respect to or relating to: (i) any claim against STPL that has occurred prior to the STPL closing date; (ii) breach or inaccuracy of any of the Sponsor's warranties in relation to STPL; (iii) any non-fulfilment, non-performance or other breach of any covenant or obligation of the Sponsor, its affiliates and/or any Manager Group Member contained in the STPL transaction documents; and (iv) any matter involving fraud, gross negligence or wilful misconduct by the Sponsor, the Investment Manager or STPL.

The Sponsor's indemnification obligations are subject to certain limitations as to quantum as specified in the Framework Agreement. Further, the indemnified parties will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments by the Sponsor in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the indemnified party in respect of any such claim. Subject to the limitations and carve-outs set out in the Framework Agreement, the Sponsor's liability for all monetary claims for breach of warranties in relation to the acquisition of STPL by the Trust, including claims for damages, will not exceed a specified amount agreed under the Framework Agreement.

Indemnification in relation to the investment in IRB LTPL, IRB GTPL and IRB KTPL

In relation to the investment in IRB LTPL, IRB GTPL and IRB KTPL by the Trust, the Sponsor has agreed to indemnify the indemnified parties against, any losses incurred or sustained by, or imposed upon, the indemnified parties based upon, arising out of, with respect to or relating to a breach or inaccuracy of any of the Sponsor's warranties in relation to each of IRB LTPL, IRB GTPL or IRB KTPL.

The Sponsor's indemnification obligations are subject to certain limitations as to quantum as specified in the Framework Agreement. Further, the indemnified parties will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments by the Sponsor in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the indemnified party in respect of any such claim. Subject to the limitations and carve-outs set out in the Framework Agreement, the Sponsor's liability for all monetary claims for breach of warranties in relation to the investment in IRB LTPL, IRB GTPL and IRB KTPL by the Trust, including claims for damages, will not exceed a specified amount agreed under the Framework Agreement.

Governing Law, Dispute Resolution and Termination

The Framework Agreement is governed by the laws of India. Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre in accordance with the SIAC Rules for the time being in force. The arbitration panel will consist of three arbitrators, each of which shall be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings will be London, United Kingdom.

The Framework Agreement will stand automatically terminated without any further action (i) as against the Financial Investors, when the entire Unitholding of the Financial Investors is sold and the entire shareholding of Croxley in the Investment Manager is sold, in accordance with the terms of the transaction documents; or (ii) as against the Sponsor, when the entire Unitholding of the Sponsor is sold or transferred in accordance with the terms of the Framework Agreement.

Debt Novation Agreements

In connection with the initial offer of Units by the Trust, the Investment Manager and the Trust (acting through the Trustee) entered into Debt Novation Agreements dated February 19, 2020 for the novation of subordinated debt and unsecured loans from the Sponsor and its Associates in consideration for the issue of Units to the Sponsor and the payment of certain amounts to the Sponsor and its Associates. The Debt Novation Agreements also provide for the treatment of Sponsor Claims and Future Claims and repayment of such debt by the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL) to the Trust on an ongoing basis.

Certain definitions in the Debt Novation Agreements are set out below:

"**Debt**" shall mean the Subordinated Debt and the Unsecured Loans;

“**Future Claims**” shall mean, with respect to a Project SPV, the claims (including any administrative, legal or other similar proceedings) made or intended to be made by such Project SPV against any Governmental Authority for events pertaining to the period after the Reference Date, including any claims for events pertaining to the period prior to the Closing Date (defined below) but which would likely adversely impact the toll revenue of the Project SPV during periods subsequent to the Closing Date;

“**Governmental Authority**” shall include the SEBI, the NHAI, the Ministry of Road Transport and Highways of the Government of India or any state or union territory of India, the Reserve Bank of India, and any national, state, regional or local government or governmental, regulatory, statutory, administrative, fiscal, taxation, judicial, or government-owned body, department, commission, authority, court, arbitrator, tribunal, agency or entity, in India or outside India, in each case, having jurisdiction over any of the parties, their operations, or the transactions contemplated in the Debt Novation Agreement and the transaction documents;

“**Lenders**” shall mean the Sponsor and its associates that have provided Subordinated Debt and Unsecured Loans to the Project SPV in connection with its project;

“**Reference Date**” shall mean, with respect to a Project SPV, the later of the (i) the Closing Date; and (ii) the project completion date under the Concession Agreement, provided that if a provisional completion certificate is issued under the terms of the Concession Agreement and additional construction is required to be undertaken after the date of such certificate, this date shall be the date of issue of the final completion certificate;

“**Sponsor Claims**” shall mean, with respect to a Project SPV: (a) any kind of claim made by such Project SPV for events pertaining to the period prior to the Reference Date and the impact of which also solely pertains to the period prior to the Reference Date; and/or (b) all construction related claims (including any administrative, legal or other similar proceedings in relation to utilities shifting, change of scope, construction, delays in construction, idling of resources, interest during construction or other matters) made or intended to be made by such Project SPV against any Governmental Authority for events pertaining to the period prior or after to the Reference Date;

“Subordinated Debt” shall mean, with respect to a Project SPV, the outstanding interest-free subordinated debt provided by the Lenders to such Project SPV; and

“**Unsecured Loans**” shall mean, with respect to a Project SPV, the outstanding interest-free unsecured loans provided by the Lenders to such Project SPV.

Treatment of Sponsor Claims and Future Claims

In consideration for the transfer and release of a portion of Subordinated Debt and Unsecured Loans by the Lenders, and all rights and obligations in relation to such Debt, the Trust and the Investment Manager have agreed that the Amounts (defined below) will be paid by the Trust to the Lenders to the extent that any such amounts are received by the Project SPV in a settlement or adjudication (including arbitration) of Sponsor Claims.

The payment of Amounts to the Lenders shall constitute full, final and complete discharge of the obligation of the Trust with respect to payment of consideration for such Subordinated Debt and Unsecured Loans.

Any payments received by the Project SPV in a settlement or adjudication (including arbitration) of Sponsor Claims will be transferred by the Project SPV to the Trust immediately upon receipt (the “**Amounts**”). The Trust may also pay up to specified amount, in case of IRB WTL, to the Lenders towards the Amounts, including out of its cash flows, and any such amounts paid will be reduced from the aggregate Amounts. If a bank guarantee is required to be submitted to the relevant Governmental Authority in lieu of such Amounts (or any part thereof), the Lenders will provide the bank guarantee. Upon the receipt of the Amounts by the Trust, the Amounts will forthwith be paid by the Trust to the Lenders. All taxes in relation to such payments will be solely borne by the Lenders.

If the final settlement or adjudication in relation to the relevant Sponsor Claim is unsuccessful, the Trust will promptly inform the Lenders, as applicable, and the Sponsor and the Financial Investors will mutually agree on treatment of any outstanding amounts in relation to such Sponsor Claims based on tax considerations in a manner mutually agreed between the Financial Investors and the Sponsor. Any tax impact on the Trust or the Project SPVs on account of such outstanding debt and/ or write-off such debt (whether pertaining to the period prior to the Closing Date or after) will only be to the account of the Lenders, and no Manager Group Member (as defined in the Debt Novation Agreements) and/or any other Unitholder should suffer/ incur a loss in connection with such debt.

The Project SPV, the Investment Manager and the Trust will render all reasonable assistance necessary to enable the payment of the Amounts to the Lenders, as applicable, including to obtain any required approval and authorization required from the NHAI or other Governmental Authority or any of the senior lenders of the Project SPV.

Any amounts received by the Project SPV or the Trust pursuant to the settlement or adjudication of Future Claims shall be distributed among the Unitholders in the proportion of their respective Unitholding percentages in the Trust in such manner as may be permitted under applicable law. In the event of any restructuring as set out above, any amounts received pursuant to Future Claims for periods prior to such restructuring shall be distributed among the Unitholders in the proportion of their respective Unitholding percentages.

Repayment of the Debt by the Project SPVs

The Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL) will repay the Subordinated Debt and Unsecured Loans to the Trust as may be mutually agreed between the Parties based on availability of cash flows. Interest at rate of 14% p.a. was chargeable on the above Debt with effect from the earlier of (i) the project completion date under the relevant concession agreement and (ii) the date of listing of the Units on one or more Stock Exchanges, and the parties have mutually agreed that interest was chargeable from the date of listing of the Units on the NSE, except in the case of UTL and CGTL, where payment of interest is subject to receipt of approval from the relevant lenders. The terms of the repayment of the unsecured loans extended to PDTPL are set out in the shareholder loan agreement dated April 5, 2022. See "— *Shareholder Loan Agreements*" below.

The above Debt shall, at all times be subordinate to the debt provided by the senior lenders. Subject to the terms of the financing agreements and the relevant escrow agreement, payments towards such Debt (including interest) will be made out of balance available in the escrow account for utilization in accordance with the instructions of the Project SPV, on the relevant interest payment date or repayment date, after meeting all payments due to the senior lenders as of such date.

Governing Law, Dispute Resolution and Termination

The Debt Novation Agreements will be governed by the laws of India. Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre in accordance with the SIAC Rules for the time being in force. The arbitration panel will consist of three arbitrators, each of which shall be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings will be Delhi, India.

The Debt Novation Agreements will stand terminated and fall away automatically without any further act by the parties (i) upon the repayment or settlement of all amounts (including interests and other charges) in relation to the Debt and (ii) there are no Amounts remaining due to the Lenders.

Shareholder Loan Agreements

The Trust has provided Shareholder Loans in the form of unsecured loans to the Project SPVs (except IRB LTPL, IRB GTPL and IRB KTPL) under the shareholder loan agreements dated February 19, 2020 with each Project SPV (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB GTPL and IRB KTPL), a shareholder loan agreement dated April 5, 2022 with PDTPL, a shareholder loan agreement dated July 29, 2023 with IRB GEPL and a shareholder loan agreement dated October 12, 2023 with STPL (collectively, the "**Project SPV Shareholder Loan Agreements**"). Additional debt is proposed to be provided by the Trust to the Project SPVs through disbursements under the Project SPV Shareholder Loan Agreements from time to time towards, *inter-alia*, funding of total project cost and working capital requirements of the Project SPVs.

For details of proposed Shareholder Loans to IRB LTPL, IRB GTPL and IRB KTPL, please see *"Objects of the Issue - Providing loans to IRB LTPL towards funding of the total project cost"*, *"Objects of the Issue - Providing loans to IRB GTPL towards funding of the total project cost"* and *"Objects of the Issue - Providing loans to IRB KTPL towards funding of the total project cost"*, on pages 72, 76 and 80 respectively.

A summary of the key terms of the Project SPV Shareholder Loan Agreements (except in respect of IRB LTPL, IRB GTPL and IRB KTPL) is set forth below.

Purpose	***AETL, IRB WTL, KTL, SYTL and YATL*** The Project SPV shall utilize the loan amounts solely for (i) the purpose of partial refinancing of certain secured loans provided to the Project SPV by the senior lenders; (ii) funding of total project cost; and (iii) working capital requirements or general corporate purposes of the Project SPV. ***CGTL, IRB HMTL, KGTL and UTL*** The Project SPV shall utilize the loan amounts solely for (i) funding of total project cost; and (ii) working capital requirements or general corporate purposes of the Project SPV. ***PDTPL, IRB GEPL and STPL*** The Project SPV shall utilize the loan amounts solely for funding of the total project cost of the Project SPV.
Term	The Project SPV shall repay the loan at the end of the concession period under the relevant concession agreement as mutually agreed between the parties to the Project SPV Shareholder Loan Agreement.
Interest	• The Project SPV (except PDTPL, IRB GEPL and STPL) shall pay accrued interest (subject to withholding of applicable taxes) at the rate of 14% p.a., or or such other rate as may be decided mutually by the parties to the Project SPV Shareholder Loan Agreement from time to time. Interest will accrue from the date of disbursement of the loan. • Interest will be chargeable from the earlier of the (i) project completion date under the relevant concession agreement and (ii) the date of listing of the Units on one or more Stock Exchanges. The parties have agreed that interest was chargeable from the date of listing of the Units on the NSE (except for UTL and CGTL, where charging of interest remains subject to the receipt of consent from the relevant lenders). • Interest will be payable in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter, provided that the Project SPV may, at its discretion, elect to pay interest on a monthly basis, and such interest shall be payable on the first day of the subsequent month for which the interest is being paid. ***PDTPL*** • The Project SPV shall pay accrued interest (subject to withholding of applicable taxes) at the rate of 14.5% p.a., or or such other rate as may be decided mutually by the parties to the Project SPV Shareholder Loan Agreement from time to time. Interest will accrue from the date of disbursement of the loan. • Interest will be chargeable from the project completion date under the concession agreement. • Interest will be payable in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter, provided that the Project SPV may, at its discretion, elect to pay interest on a monthly basis, and such interest shall be payable on the first day of the subsequent month for which the interest is being paid ***IRB GEPL*** • The Project SPV shall pay accrued interest (subject to withholding of applicable taxes) at the rate of 15% p.a., or or such other rate as may be decided mutually by the parties to the Project SPV Shareholder Loan Agreement from time to time. • Interest will accrue and be chargeable from the appointed date under the concession agreement. • Interest will be payable when able following the appointed date under the concession

	agreement in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter, provided that the Project SPV may, at its discretion, elect to pay interest on a monthly basis, and such interest shall be payable on the first day of the subsequent month for which the interest is being paid. ***STPL*** • The Project SPV shall pay accrued interest (subject to withholding of applicable taxes) at the rate of 15% p.a., or or such other rate as may be decided mutually by the parties to the Project SPV Shareholder Loan Agreement from time to time. • Interest will accrue and be chargeable from the project completion date under the concession agreement. • Interest will be payable when able following the project completion date under the concession agreement in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter, provided that the Project SPV may, at its discretion, elect to pay interest on a monthly basis, and such interest shall be payable on the first day of the subsequent month for which the interest is being paid.
Repayment	• The Trust may call on the Project SPV to prepay the loan, in full or part, or permit the Project SPV to make payments of the outstanding loan, in full or part, after the date such payment is due, at any time during the term of the Project SPV Shareholder Loan Agreement until the final settlement date (as defined in the Project SPV Shareholder Loan Agreement). • The Project SPV may prepay the whole or part of the loan together with interest on that amount accrued up to the date of prepayment, by giving a prior written notice of not less than 30 days to the Trust, specifying the amount to be prepaid and the date of proposed prepayment. • The loan (in one or more tranches) provided under the Project Shareholder Loan Agreement shall, at all times be subordinate to the debt provided by the senior lenders. Subject to the terms of the financing agreements and the escrow agreements, payments towards the loan amounts (including interest) shall be made out of balance available in the escrow account for utilization in accordance with the instructions of the Project SPV on the relevant interest payment date or repayment date, after meeting all payments due to the senior lenders as of such date.
Security	Unsecured
Events of Default	The occurrence of any of the events or circumstances set out below shall constitute an "**Event of Default**", if not remedied within 180 days (or such extended period as may be provided by the Trust at its sole discretion) from the date of receiving notice of such default from the Trust. The Project SPV shall promptly give written notice to the Trust of any Event of Default and of any other event which, with the giving of notice or lapse of time or otherwise could constitute an Event of Default, and inform the Trust of any action taken or proposed to be taken by the Project SPV in connection therewith. • **Non-Payment:** The Project SPV fails to pay any amount due under the Project SPV Shareholder Loan Agreement or any other finance documents within a period of 180 days from the relevant due date. If debt due to senior lenders is outstanding, the Trust may declare a non-payment Event of Default only if one or more of the senior lenders declares an Event of Default in relation to amounts due to such senior lenders. • **Breach of Covenants and Undertakings:** The Project SPV breaches any provision of the Project SPV Shareholder Loan Agreement or any other finance documents. • **Misrepresentation:** Any representation or statement made by the Project SPV in any finance document or any other document delivered by or on behalf of the Project SPV under or in connection with any transaction document is or proves to have been incorrect or misleading in any material respect when made or results in a material adverse effect on the Project SPV or the relevant project. • **Cessation of Business**: The Project SPV ceasing or threatening or likely to cease, to carry on all or substantially all of its business or operations. • **Insolvency:** The Project SPV is unable to, or presumed or deemed to be unable to, or

	admits its inability to, pay its debts as they fall due, suspends making payments on any of its debts or, by reason of actual or anticipated financial difficulties, commences negotiations with one or more of its creditors with a view to rescheduling any of its indebtedness. • **Insolvency proceedings:** Any corporate action, legal proceedings or other procedure is taken in relation to: (a) the suspension of payments, a moratorium of any indebtedness, winding-up, dissolution, administration, provisional supervision or reorganization (by way of voluntary arrangement, scheme of arrangement or otherwise) of the Project SPV other than a solvent liquidation or reorganization of the Project SPV; (b) a composition or arrangement with any creditor of the Project SPV, or an assignment for the benefit of creditors generally of the Project SPV, or a class of such creditors; (c) the appointment of a liquidator, receiver, and manager, administrator, administrative receiver, compulsory manager, provisional supervisor or other similar officer in respect of the Project SPV or any of its assets; or (d) or any analogous procedure is taken in any jurisdiction. • **Unlawfulness and Invalidity:** (a) It is or becomes unlawful for the Project SPV to perform its obligations under the Project SPV Shareholder Loan Agreement or any other finance documents; or (b) any finance document is not or ceases to be legal, valid, binding or enforceable. • **Nationalization or Expropriation**: Any governmental authority has taken or has threatened to take any action to expropriate, condemn, nationalize or seize the relevant project or whole or part of the assets of the Project SPV, or the whole or substantially whole or part of the relevant project, resulting in the Project SPV being deprived or threatened to deprive to carry on its business or which will have a material adverse effect on the Project SPV or the relevant project on the operation of the business of the Project SPV. • **Cross Default**: The Project SPV defaults in the payment of any principal, interest, premium or other amount due (whether by scheduled maturity, mandatory prepayment, acceleration or demand) under any loan or credit agreement and/or defaults in the payments due under any existing facility agreement or the occurrence of an event of default under the existing facility agreements of the Project SPV. On and at any time after the occurrence of an Event of Default which has not been waived or cured and which is continuing, the Trust may, upon the delivery of seven business days' notice to the Project SPV of the occurrence of an Event of Default: (i) require all or part of the outstanding amounts to be payable immediately; and (ii) exercise such other rights as may be available to the Trust under the Project SPV Shareholder Loan Agreement, the finance documents or under applicable law. No further disbursement shall be made after the occurrence of an Event of Default.
Dispute Resolution	Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre in accordance with the Arbitration Rules of the Singapore International Arbitration Centre ("**SIAC Rules**") for the time being in force. The arbitration panel will consist of three arbitrators, each of which shall be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings shall be Delhi, India.
Governing Law	Laws of India

Unitholding pattern of the Trust

The table below provides details of the pre-Issue Unitholding pattern of the Trust as of December 31, 2023:

Category	Category of Unitholder	No. of Units	As a % of the total outstanding Units	No. of Units mandatorily held		Number of Units pledged or otherwise encumbered	
				No. of Units	As a % of total Units held	No. of Units	As a % of total Units held
(A)	**Sponsor(s)/Investment Manager/Project Manager(s) and their associates/related parties**						
(1)	**Indian**						
(a)	Individuals/HUF	0	0.00	0	0.00	0	0.00
(b)	Central/State Govt.	0	0.00	0	0.00	0	0.00
(c)	Financial Institutions/Banks	0	0.00	0	0.00	0	0.00
(d)	Any other (specify)	0	0.00	0	0.00	0	0.00
	BODIES CORPORATE	521,239,840	51.02	131,893,990	25.30	180,220,846	34.58
	Sub-total (A)(1)	**521,239,840**	**51.02**	**131,893,990**	**25.30**	**180,220,846**	**34.58**
(2)	**Foreign**						
(a)	Individuals (Non Resident Indians/Foreign Individuals)	0	0.00	0	0.00	0	0.00
(b)	Foreign government	0	0.00	0	0.00	0	0.00
(c)	Institutions	0	0.00	0	0.00	0	0.00
(d)	Foreign Portfolio Investors	0	0.00	0	0.00	0	0.00
(e)	Any other (specify)	0	0.00	0	0.00	0	0.00
	Sub-total (A)(2)	0	0.00	0	0.00	0	0.00
	Total unitholding of Sponsor and Sponsor group (A) = (A)(1) + (A)(2)	**521,239,840**	**51.02**	**131,893,990**	**25.30**	**180,220,846**	**34.58**
(B)	**Public holding**						
(1)	**Institutions**						
(a)	Mutual Funds	0	0.00				
(b)	Financial Institutions/Banks	0	0.00				
(c)	Central/State Govt.	0	0.00				
(d)	Venture Capital Funds	0	0.00				
(e)	Insurance companies	0	0.00				
(f)	Provident/pension funds	0	0.00				
(g)	Foreign portfolio investors	255,623,181	25.02				
(h)	Foreign venture capital investors	-	0.00				

Category	Category of Unitholder	No. of Units	As a % of the total outstanding Units	No. of Units mandatorily held		Number of Units pledged or otherwise encumbered	
				No. of Units	As a % of total Units held	No. of Units	As a % of total Units held
(i)	Foreign bodies	244,830,244	23.96				
	Sub-total (B)(1)	**500,453,425**	**48.98**				
(2)	**Non-institutions**						
(a)	Central government/state government(s)/President of India	0	0.00				
(b)	Individuals	0	0.00				
(c)	NBFCs registered with RBI	0	0.00				
(d)	Any other (specify)	0	0.00				
	TRUSTS	0	0.00				
	NON RESIDENT INDIANS	0	0.00				
	CLEARING MEMBERS	0	0.00				
	BODIES CORPORATE	0	0.00				
		0	0.00				
	Sub-total (B)(2)	0	0.00				
	Total public unitholding (B) = (B)(1) + (B)(2)	**500,453,425**	**48.98**				
	Total Units outstanding (C) = (A) + (B)	**1,021,693,265**	**100.00**				

Unitholders holding more than 5% of the Units as of December 31, 2023

S. No.	Name of the Unitholder	Pre-Issue		Post-Issue*#	
		No. of Units	% of Unitholding@	No. of Units	% of Unitholding@
1.	IRB Infrastructure Developers Limited	52,12,39,840	51	56,80,39,840	51
2.	Anahera Investment Pte. Ltd.	25,56,23,181	25	27,86,23,181	25
3.	Bricklayers Investment Pte. Ltd.	6,11,57,561	6	6,65,57,561	6
4.	Chiswick Investment Pte. Ltd.	6,11,57,561	6	6,65,57,561	6
5.	Stretford End Investment Pte. Ltd.	6,11,57,561	6	6,65,57,561	6
6.	Dagenham Investment Pte. Ltd.	6,13,57,561	6	6,67,57,561	6
TOTAL		**1,02,16,93,265**	**100**	**1,11,30,93,265**	**100**

**Subject to finalization of the Basis of Allotment*

#Assuming full subscription by all Eligible Unitholders to the extent of their respective Rights Entitlements in the Issue.

@The unitholding percentages in this table have been rounded-off to the nearest whole number for the purposes of presentation only.

Fees and Expenses

1. *Fees and expenses of the Investment Manager*

Pursuant to the terms of the Investment Management Agreement, the fees will be paid to the Investment Manager for the services provided by it ("**Management Fees**"). The Management Fees were initially proposed to be an annual amount of ₹36.00 million per annum. The Management Fees may be revised for every Financial Year with the approval of the Unitholders, where the votes cast by Unitholders so entitled and voting in favor of a resolution are not less than one-and-a-half times the votes cast against such resolution.

Pursuant to a resolution dated July 4, 2023 of the Board of Directors of the Investment Manager and a resolution dated July 27, 2023 of the Unitholders, the Management Fees have been revised to be equivalent to 110% of the cost incurred by the Investment Manager in connection with providing investment management services to the Trust including routine administrative and operational expenses (exclusive of any out of pocket expenses, reimbursements and taxes).

2. *Fees and expenses of the Trustee ("Trusteeship Fee")*

The fee payable to the Trustee for acting as the trustee to the Trust pursuant to an engagement letter dated June 27, 2019 is set out below. Any amendment to trusteeship fees will require the approval of the Unitholders, where the votes cast by Unitholders so entitled and voting in favor of a resolution are not less than one-and-a-half times the votes cast against such resolution.

Particulars	Description
Service charges	Service charges are payable on a quarterly basis, i.e., ₹0.28 million plus applicable taxes payable quarterly in advance on April 1 for April to June, July 1 for July to September, October 1 for October to December and January 1 for January to March each year until full and final repayment of funds to Unitholders, winding up of the Trust and termination of the Indenture of Trust.
Delayed payment charges	In case the payment of service charges is not received within a period of 30 days from the date of the bill, the Trustee reserves the right to charge delayed payment charges at the rate of 12% p.a. on the outstanding amount.
Reset clause	The Trustee has the right to reset the service charges after expiry of two years from the date of execution of the Indenture of Trust as mutually agreed with the Investment Manager.
Out-of-pocket expenses	To be claimed by the Trustee on an actual basis within intimation to the Sponsor/Investment Manager
Invocation and enforcement	Any other work relating to invocation and enforcement of the Trust Assets in case of default would attract separate expenses and fees

In case of late payment of the above fees, penal interest on the outstanding amount would be payable in accordance with the terms of the Indenture of Trust (if applicable).

The above fee structure is subject to certain conditions specified in the engagement letter.

3. *Fees and expenses of the Project Manager*

Pursuant to the Project Implementation Agreements, the Project SPVs which operate road assets that have not been completed will make payments to the Project Manager for the remaining engineering, procurement and construction works in relation to the relevant project ("**EPC Payments**") on a monthly basis, or as otherwise agreed among the parties to the Project Implementation Agreements based on invoices raised by the Project Manager. The agreed EPC Payments are set forth in the relevant Project Implementation Agreements, copies of which will be available for inspection to Eligible Unitholders from the date of this Letter of Offer until the Issue Closing Date. See "*Material Contracts and Material Documents for Inspection*" on page 732.

Pursuant to the Project Implementation Agreements, the Project SPVs will also make payments to the Project Manager for the operation and maintenance works in relation to the relevant project ("**O&M Payments**", and together with the EPC Payments, the "**Project Management Payments**") on a monthly basis, or as otherwise agreed among the parties to the Project Implementation Agreements based on invoices raised by the Project Manager. The agreed O&M Payments applicable for the initial term of the Project Implementation Agreements (i.e., 10 years from the date of the relevant agreement) are set forth in the relevant Project Implementation Agreements, copies of which will be available for inspection by the Eligible Unitholders from the date of this

Letter of Offer until the Issue Closing Date. See "*Material Contracts and Material Documents for Inspection*" on page 732.

No additional payments, including those on account of out of pocket expenses, delay in construction timeline, payment of taxes, any statutory liabilities, any actual losses or damages incurred on any account whatsoever, will be made to the Project Manager over and above the Project Management Payments, except for any payments related to change of scope (as defined in the relevant concession agreement) or utility shifting as required by the NHAI, which will be paid by the relevant Project SPV to the Project Manager as and when such payments are received from the NHAI. If a Project SPV has made any payments to NHAI related to change of scope, such amount will be reduced from the EPC Payments. If any payment due to a Project SPV by the NHAI in respect of the EPC works or the O&M works is delayed in terms of the relevant concession agreement, the payment obligations of the Project SPV to the Project Manager will be correspondingly delayed until the Project SPV receives payment from the NHAI.

Pursuant to addenda dated May 6, 2021 (the "**Addenda**") to the Project Implementation Agreements for CGTL, IRB HMTL, KGTL, IRB WTL and UTL, such Project SPVs have agreed to pay the Project Manager additional costs in relation to certain delays by NHAI and the lockdowns implemented due COVID-19 in the manner and subject to the conditions set out in the Addenda. Under the Project Implementation Agreement for PDTPL, PDTPL is entitled to retain a certain percentage of the total EPC Payments for the project which will be released to the Project Manager upon the completion of the project or as may be mutually agreed among the parties. Certain arrangements in relation to a mobilization advance have also been agreed under such Project Implementation Agreement.

Pursuant to the IRB LTPL Project Implementation Agreement, the IRB GTPL Project Implementation Agreement and the IRB KTPL Project Implementation Agreement, each of IRB LTPL, IRB GTPL and IRB KTPL will make payments to the Project Manager for the operation and maintenance works (the "**Project Management Payments**") in relation to the relevant project on a monthly basis, or as otherwise agreed among the parties to the relevant project implementation agreement based on invoices raised by the Project Manager. The agreed Project Management Payments applicable for the initial term of the relevant project implementation agreements (i.e., 10 years from the date of the relevant agreement) are set forth in the relevant project implementation agreement. No additional payments, including those on account of out of pocket expenses, delay in construction timeline, payment of taxes, any statutory liabilities, any actual losses or damages incurred on any account whatsoever, will be made to the Project Manager over and above the Project Management Payments, except for (i) any payments related to change of scope (as defined in the relevant concession agreement) or utility shifting as required by the concessioning authority, which will be paid by the relevant Project SPV to the Project Manager as and when such payments are received from the concessioning authority; and (ii) any payment received by the relevant Project SPV from the concessioning authority as compensation for additional expenses actually incurred by the Project Manager pursuant to a change in law for the execution of the O&M works. If the relevant Project SPV makes any payments to the concessioning authority related to change of scope, such amount will be reduced from the Project Management Payments. If any payment due to the relevant Project SPV by the concessioning authority in respect of the works for the project is delayed in terms of the relevant concession agreement, the payment obligations of the relevant Project SPV to the Project Manager will be correspondingly delayed until the relevant Project SPV receives payment from the concessioning authority.

Additionally, pursuant to the IRB LTPL Project Implementation Agreement, the IRB GTPL Project Implementation Agreement and the IRB KTPL Project Implementation Agreement, each of IRB LTPL, IRB GTPL and IRB KTPL will make one-time lump sum (fixed) contract price payment to the Project Manager for strengthening and upgradation cost (the "**Initial Upgradation Cost**"). The terms and conditions on which the Initial Upgradation Cost will be paid are set forth in the relevant Project Implementation Agreements, copies of which will be available for inspection by the Eligible Unitholders from the date of this Letter of Offer until the Issue Closing Date. See "*Material Contracts and Material Documents for Inspection*" on page 732.

4. ***Fees and expenses of the Auditor and Valuer***

The fees and expenses paid or payable by the Investment Manager to the Valuer and the Joint Statutory Auditors is approximately ₹1.42 million and approximately ₹2.36 million, respectively, along with applicable goods and services tax.

Set-up costs

In connection with the establishment and registration of the Trust, the Sponsor has incurred ₹1.1 million in expenses.

INDUSTRY OVERVIEW

The information contained in this section is derived from various government and other industry sources. The Investment Manager, the Trustee, the Sponsor, the Lead Manager or any other person connected with the Issue have not independently verified this information. Industry sources and publications generally state that the information contained therein has been obtained from sources generally believed to be reliable, but that their accuracy, completeness and underlying assumptions are not guaranteed and their reliability cannot be assured. Industry publications are also prepared on information as of specific dates and may no longer be current or reflect current trends. Accordingly, investment decisions should not be based on such information. All references to years refer to calendar years except as otherwise stated.

Overview of the Global and Indian Economies

As per the World Bank, global growth is expected to slow to 2.4 per cent in 2024—the third consecutive year of deceleration—reflecting the lagged and ongoing effects of monetary policies to rein in high inflation, restrictive credit conditions, and global trade and investment. Near-term prospects are diverging, with subdued growth in major economies alongside improving conditions in emerging markets and developing economies (EMDEs) with strong fundamentals. Meanwhile, the outlook for EMDEs with pronounced vulnerabilities remains precarious amid elevated debt and financing costs. Downside risks to the outlook predominate.

The recent conflict in the Middle East, in addition to the Russian Federation's invasion of Ukraine, has heightened geopolitical risks. Conflict escalation could lead to surging energy prices, with broader implications for global activity and inflation. Other risks include financial stress related to elevated real interest rates, persistent inflation, weaker-than-expected growth in China, further trade fragmentation, and climate change-related disasters. Against this backdrop, policymakers face enormous challenges and difficult trade-offs.

As per IMF, India's economy has rebounded from the pandemic to become an important driver of global growth. GDP growth reached 7.2 per cent in FY 2022-23 moderating from 9.1 per cent in FY 2021-22. Today, India is the 5th largest with a GDP of USD 3.7 trillion (est. FY24). In the next three years, India is expected to become the third-largest economy in the world, with a GDP of USD 5 trillion. The country ranked third when GDP was compared in terms of purchasing power parity at USD 11.90 trillion in 2022, whereas India's nominal GDP per capita is ~USD 2,411 in 2022.

According to data from the Department of Economic Affairs, the foreign exchange reserves stood at USD 623.2 billion as of December 29, 2023. According to the Department for Promotion of Industry and Internal Trade (DPIIT), FDI equity inflow in India stood at USD 20,488 million between April 2023 to September 2023.

India's growth is expected to remain strong, supported by macroeconomic and financial stability. Presently, the official estimate for growth in FY24 stands at 7.3 per cent and the headline inflation is expected to gradually decline to the target.

This positive growth outlook is primarily due to the digital revolution, regulatory environment supportive of entrepreneurship, measured targeted at economic upliftment of the vulnerable sections of the society, developing manufacturing sectors while building the supporting physical infrastructure, and efforts directed at diversifying export basket and moving toward higher value–added products. At the level of sub-national governments, reforms that would unleash the productive potential of India's MSMEs with streamlined regulatory and compliance obligations and sensitive enforcement, will further help in the economic growth.

India's Infrastructure Opportunity

Infrastructure sector is a key driver for the Indian economy and is set to become a biggest driver for the country that aspires to become a $5 trillion economy soon. Growing urbanization, demand for energy and financing needs for sustainable living pose a challenge for the infrastructural setup in the country. Infrastructure, and the lack of it, is envisaged as the primary growth constraint, while good infrastructure is widely recognized as an enabler of growth.

In the coming era of supply chain disruptions, new technologies and reversal of financial deleveraging, infrastructure growth must keep pace with the need created for it. The opportunities in the infrastructure sector have seen an incremental curve over previous years and are growing to establish the sector as a key driver in India's development story at a high rate.

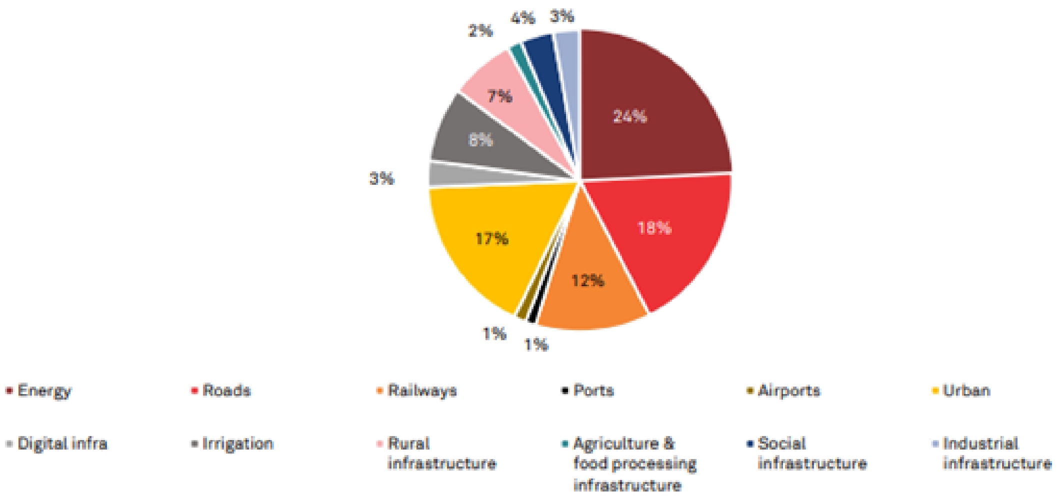
India has about 66.71 lakh km of road network, which is the second largest in the world. The Government of India has given a push to the capital expenditure for key infrastructure sectors, especially highways, has got a boost in Budget 2023-2024. The total allocation for the highways sector has increased to Rs.2.7 lakh crore from Rs.1.99 lakh crore in FY 2022-2023. *(Source: Government of India, Ministry of Finance, Union Budget 2023-2024).*

National Infrastructure Pipeline

In December 2019, the Government launched the National Infrastructure Pipeline (the "NIP"), an investment plan for enhancing infrastructure in identified sectors, which is a first-of-its-kind exercise to provide world-class infrastructure across the country and improve the quality of life for all citizens. NIP is expected to enable a forward outlook on infrastructure projects to create jobs, improve ease of living and provide equitable access to infrastructure for all, thereby making growth more inclusive. NIP includes economic and social infrastructure projects. NIP comprises brownfield and greenfield infrastructure projects of above INR 100 crore across both economic and social infrastructure sectors.

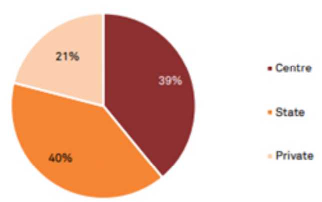
During the Financial Years 2020 to 2025, sectors such as energy (24%), roads (18%), urban (17%) and railways (12%) are expected to amount to approximately 71% of the projected infrastructure investments in India, with a total capital expenditure projected at ₹111 lakh crore. (*Source: National Infrastructure Pipeline – Report of the Task Force, Department of Economic Affairs, Ministry of Finance, Government of India – Volume I (the "Task Force Report – Volume I")*)

Figure 11 Sector-wise break-up of capital expenditure of Rs 111 lakh crore during fiscals 2020-2025



Source: Ministries/ departments/state governments/private sector

The Government of India (39%) and state governments (40%) are expected to have an almost equal share in implementing the NIP in India, followed by the private sector (21%). (*Source: The Task Force Report – Volume I*)

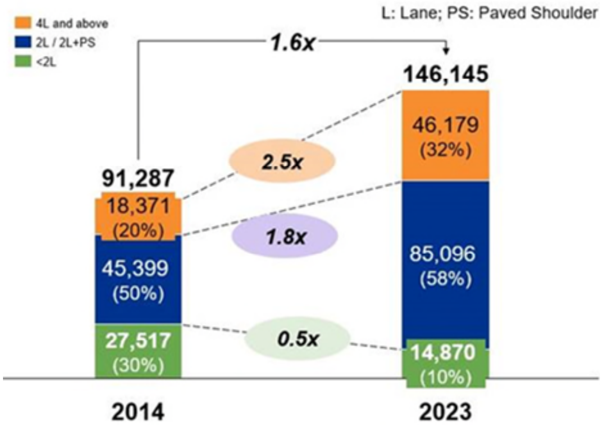


Source: PIRF submitted by ministries/ departments/state governments/private sector

NIP was launched with 6,835 projects and has expanded to capture over 9,288 projects with a total project outlay of Rs 108.88 lakh cr between 2020-2025. Transport (42%), energy (25%), water and sanitation (15%) and social infrastructure (3%) sectors amount to around 85% of the projected infrastructure investments under NIP.

Roads and Highways

According to the MoRTH, Financial Year 2022-23 was the year of consolidation of the gains that accrued from major policy decisions taken in the previous eight years, a time for monitoring of ongoing projects, tackling road blocks and adding to the already impressive pace of work achieved during the past years. During the year, the MoRTH and its associated organizations have expanded the national highways network in the country, taking various steps to make these highways safe for the commuters and making best efforts to minimize adverse impact on the environment. As a result, over the last eight years, length of National Highways has gone up by 60.09% from 91,287 km (FY 2013-14) to 146,145 km (as on Nov'23) out of the set target of 200,000 kms by 2024-2025. During the same period, the length of 4 lanes and above NH increased by 2.5 times – 18,387 km (2014) to 46,179 km (Nov'23) and the length of less than 2 lane NH decreased from 30% (2014) to 10% (Nov'23) *(Source: MoRTH press release titled "Year End Review 2023: Ministry of Road Transport and Highways" dated January 05, 2024 and MoRTH Annual Report 2022-23)*.



Details of National Highway length constructed per day during last five Financial Years are as follows:

Year	Length in km	Pace (km per day)
2018-19	10,855	29.74
2019-20	10,237	27.97
2020-21	13,327	36.51
2021-22	10,457	28.64
2022-23	10,331	28.30
2023-24 (upto Nov'23)	5,248	-

(Source: MoRTH press release titled "Year End Review 2023: Ministry of Road Transport and Highways" dated January 05, 2024)

The pace of National Highways (NH) construction has increased consistently between 2014-15 and 2023-24 due to the systematic push through corridor-based National Highway development approach. The average pace of NH construction increased by 143% to 28.3 km/day from 2014 and in the year 2020, the MoRTH had achieved the record-breaking milestone of constructing ~37 km highways per day *(Source: MoRTH press release titled "Year End Review 2023: Ministry of Road Transport and Highways" dated January 05, 2024)*. In order to provide a boost to infrastructure development, the MoRTH has increased the annual project award by 38.3% in the past four years from 8,948 km in Financial Year 2019-2020 to 12,375 km in Financial Year 2022-2023.

MoRTH has also undertaken green initiatives by planting about 3.46 Crore trees since 2016, besides utilizing municipal waste for embankment construction, waste plastics in Bituminous construction and waste slag in Cement Concrete Construction.

Schemes

Bharatmala Pariyojana: This is the umbrella program for the highways sector that aims to optimize the efficiency of road traffic movement across the country by bridging critical infrastructure gaps. The Phase I of the Bharatmala Pariyojana approved in October 2017, focuses on development of 34,800 km of National Highways. The Pariyojana emphasized on a "corridor based National Highway development" to ensure infrastructure symmetry and consistent road user experience. The key components of the Pariyojana are Economic Corridors development, Inter-corridor and feeder routes development, National Corridors Efficiency Improvement, Border and International Connectivity Roads, Coastal and Port Connectivity Roads and Expressways. The Bharatmala Pariyojana phase 1 is to be completed by FY 2027-28.

The Bharatmala (approved for estimated cost of Rs. 6,92,324 crore including other ongoing schemes) is to be funded from CRIF Cess (Rs. 2,37,024 crore) collected form Petrol & Diesel (as per Central Road & Infrastructure Fund Act, 2000, erstwhile CRF Act, 2000), amount collected from toll remittances (Rs. 46,048 crore) apart from additional budgetary support (Rs. 59,973 crore), expected monetisation of NHs through TOT (Toll-Operate-Transfer) (Rs. 34,000 crore), Internal & Extra Budgetary Resources (IEBR) (Rs. 2,09,279 crore) and Private Sector Investment (Rs. 1,06,000 crore) as per Financing Plan upto 2021-22. However, due to increase in the project cost as well as cost of land acquisition, the revised financial proposal for the Bharatmala Pariyojana is under process for approval. The status of various components of Bharatmala Pariyojana Phase-I and other schemes up to December 31, 2022 are as under:

S No.	Components	Total Length in km	Total Length Completed until December 31, 2022 in km
1.	Economic corridors development	9,000	3,155
2.	Inter-corridor and feeder roads	6,000	1,381
3.	National Corridors Efficiency improvements	5,000	1,412
4.	Border and International connectivity roads	2,000	1,213
5.	Coastal and port connectivity roads	2,000	93
6.	Expressways	800	779
7.	Subtotal	24,800	8,033
8.	Balance road works under NHDP	10,000	3,756
9.	**Grand Total**	34,800	11,789

(Source: MoRTH Annual Report for Financial Year 2022-23)

According to the MoRTH Annual Report 2022 23, Bharatmala Pariyojana envisages 60% projects on Hybrid Annuity Mode, 10% projects on BOT (Toll) Mode and 30% projects on EPC mode respectively. Total aggregate length of 25,713 km with a total capital cost of Rs. 7,81,845 crore have been approved and awarded till date under Bharatmala Pariyojana (including 6,649 km length of residual NHDP with a total capital cost of Rs. 1,51,991 crore). Out of the total approved 25,713 km, an aggregate length of 14,317 km have been approved on EPC mode, an aggregate length of 10,989 km on HAM mode and an aggregate length of 408 km on BOT (Toll) mode (EPC: HAM: BOT:: 56%:42%:2%).

Out of the 34,800 km approved under Bharatmala Pariyojana Phase-I (including residual NHDP component to be completed under Bharatmala Phase-I), the total length of 26,350 km have been awarded and 14,783 km has been constructed upto 31.10.2023.

Pradhan Mantri (PM) Gati Shakti National Master Plan (NMP): The seven engines that drive PM Gati Shakti are Roads, Railways, Airports, Ports, Mass Transport, Waterways and Logistics Infrastructure. The scope of PM Gati Shakti National Master Plan will encompass the seven engines for economic transformation, seamless multimodal connectivity and logistics efficiency. The projects pertaining to these 7 engines in the National Infrastructure Pipeline will be aligned with PM Gati Shakti framework. PM Gati Shakti National Master Plan is a critical tool for integrating economic & infrastructural planning and development *(Source: National Master Plan (pmgatishakti.gov.in))*. About 100 critical infrastructure gap projects have been prioritized for development in FY 2023-24 and Rs. 75,000 Cr. have been allocated for the same. Similarly, with multimodal infrastructure development, India's logistics cost will reduce further, improve ease of living and ease of doing business in the country. The main aim of this program is a faster approval process which can be done through the Gati Shakti portal and digitized the approval process completely.

National Electronic Toll Collection (FASTag) programme: the flagship initiative of MoRTH and NHAI has been implemented on pan India basis in order to remove bottlenecks and ensure seamless movement of traffic and collection of user fee as per the notified rates, using passive Radio Frequency Identification (RFID) technology which is made compulsory with effect from February 15, 2021. The implementation of the FASTag system for toll collection in India has been a resounding success, with a consistent growth trajectory. The daily revenue collected from tolls through the use of FASTag has reached an all-time high, of over INR 193 crore as on 29 April 2023 *(Source: MoRTH press release dated November 21, 2019 and NHAI press release dated May 2, 2023)*. Average Daily collection via FASTag on NH fee plazas is Rs. 147.31 crore and Number of average daily ETC transactions on NH fee plazas is Rs.86.61 Lakhs in F.Y. 23-24 (Till Nov 2023).

Outlook

India's infrastructure sector is evolving and the key trends demonstrate positivity and optimism. The market for roads and highways in India is projected to exhibit a CAGR of 36.16% during 2016-2025, on account of growing Government initiatives to improve transportation infrastructure in the country. For the period of 2016-17 to 2021-22, the CAGR stands at 20%.

Development and maintenance of road infrastructure is a key Government priority, the sector has received budgetary support over the years. During the past years, the standardized processes for Public Private Partnership & public funded projects and a clear policy framework relating to bidding and tolling have also been developed. The major initiatives undertaken by the Government such as National Infrastructure Pipeline (NIP) and the PM Gati Shakti National Master Plan aims to raise productivity, and accelerate economic growth and sustainable development.

Viksit Bharat @ 2047 is the vision of the Government of India to make India a developed nation by 2047. In line with the objective, the MoRTH seeks an ambitious plan to construct 50,000 km of high-speed (access-controlled) corridors by the year 2047 The highways sector in India has been at the forefront of performance and innovation. The government seeks expanding the National Highway network to 2 lakh kilometres by 2025 emphasizing the construction of the World Class Road infrastructure in time bound & target oriented way.

India has a developed framework for Public-Private-Partnerships (PPP) in the highway sector. The Asian Development Bank ranked India at the first spot in PPP operational maturity and also designated India as a developed market for PPPs. The Hybrid Annuity Model (HAM) aims to balance risk appropriated between private and public partners and boosted PPP activity in the sector. In the recent past, the Build Operate Transfer (BOT) projects have witnessed renewed interest from private players. NHAI has identified around 937 km of highway stretches to be awarded under BOT (Toll) in FY 2023-24.

Asset recycling, through the Toll Operate Transfer (TOT) model has also been taken up by the NHAI and other State Government agencies is garnering increased interest among the investors. Since its launch in 2018, NHAI has successfully completed 6 rounds of the Road Asset (bundle of roads) of monetization through TOT mode and raised Rs. 26,366 crores. NHAI planned to monetise 46 operational highway stretches of total length of 2,612 kms in the FY 2023-2024 through TOT/ InvIT mode. In the current FY 2023-24, NHAI signed the Concession Agreements for TOT bundles 11, 12, 13 & 14 and realization of Rs 15,968 Cr Concession Fee is expected in FY 2023-24. Total asset monetization under this model is expected to be Rs 42,334 Cr by the end of FY 2023-24.

The MoRTH has set a target of developing 40 km of National Highways and Expressways per day across the country for FY 2023-2024. In order to improve the comfort and convenience of the highway users, the Ministry has planned development of state-of-the-art Way Side Amenities (WSA) at approximately every 40 kms along the National Highways. A total of 1000+ sites are planned to be awarded by 2024-25 of which 198 Wayside Amenities (WSAs) have already been awarded.

A network of 35 Multimodal Logistics Parks is planned to be developed as part of Bharatmala Pariyojana, with a total investment of about Rs 46,000 crore, which once operational, shall be able to handle around 700 million metric tonnes of cargo. Of this, MMLPs at 15 prioritized locations will be developed with a total investment of about Rs 22,000 Crore. These Multi-Modal Logistics Parks shall serve as regional cargo aggregation and distribution hubs for various industrial and agricultural nodes, consumer hubs and EXIM gateways such as seaports with multi-modal connectivity. In certain cases, the MMLPs are also being developed in tandem with the Inland Waterway Terminals under the Sagarmala Pariyojana to further reduce the cost of inland cargo movement at a much larger scale as compared to conventional road-based movement.

India currently has 87 operational and under implementation ports along its coastline. All major operational ports currently have 4 lane and above last mile road connectivity. MORTH and its implementing agencies have planned the development of 108 Port Connectivity Road (PCR) projects of length ~3,700 km to improve the last mile connectivity of all 87 operational and under implementation ports.

Working towards development of around 10,000 km of Optic Fibre Cables (OFC) infrastructure across the country by FY2024-25, National Highways Logistics Management Limited (NHLML), a fully owned SPV of NHAI, is implementing the network of Digital Highways by developing integrated utility corridors along the National Highways to develop OFC infrastructure. Around 1,367 km on Delhi – Mumbai Expressway and 512 km on Hyderabad - Bangalore Corridor have been identified for the Digital Highway Development.

Under Parvatmala Pariyojana, ropeway projects of ~60 kms length are planned for award by FY2023-24. Ropeways have emerged as a convenient, safe and preferred mode of transportation to provide both, first as well as last mile connectivity to such hilly & inaccessible areas or to help de-congest urban congestion areas.

The second phase of the Government of India's Bharatmala programme has been announced for launch. 5,000 km worth of projects are expected to be constructed under the aegis of this programme and Detailed Project Reports (DPRs) are being prepared prior to the approval of the projects so as to speed up the implementation process. In order to facilitate seamless travel between important economic centres, Bharatmala Phase-2 seeks to improve connectivity to a number of infrastructure projects, including multi-modal logistics parks (MMLPs) and under-construction expressways. The new phase would also take up the construction of highways that decongest existing roads, ring roads around major industrial centres and bypasses. The simultaneous implementation of phase-II projects will help in operationalising the remaining projects under phase-I, which is now scheduled to be completed by 2027.

BUSINESS

Some of the information in this section, including information with respect to our plans and strategies, contains forward-looking statements that involve risks and uncertainties. Please see "Forward-Looking Statements" and "Risk Factors" on pages 15 and 17, respectively, for a discussion of certain factors that may affect our business, results of operations or financial condition. Our actual results may differ materially from those expressed in or implied by these forward-looking statements.

Prospective investors should read this section together with the sections "Industry Overview", "Financial Statements", "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Summary of the Concession Agreements" on pages 118, 333, 666 and 165, respectively, as well as the other information contained in this Letter of Offer.

This Letter of Offer includes (i) unaudited condensed interim consolidated financial statements of the Trust and the Project SPVs as of and for the nine-month period ended December 31, 2023; (ii) unaudited condensed interim financial statements of the Trust and the Project SPVs as of and for the Financial Years 2023, 2022 and 2021; (iii) unaudited condensed interim standalone financial statements of the Trust as of and for the nine-month period ended December 31, 2023; and (iv) audited standalone financial statements of the Trust as of and for the Financial Years 2023, 2022 and 2021.

IRB LTPL was incorporated on November 10, 2023 and the Consolidated Financial Statements includes information for IRB LTPL since its incorporation. IRB KTPL and IRB GTPL were incorporated on January 1, 2024, i.e., after December 31, 2023. Accordingly, the Consolidated Financial Statements does not include information for IRB KTPL and IRB GTPL. Given that IRB KTPL and IRB GTPL were incorporated on the above date and have not undertaken any operations, (i) pro forma financial statements of the Trust, IRB KTPL and IRB GTPL has not been prepared; (ii) audited financial statements of IRB KTPL and IRB GTPL for the period from January 1, 2024 until the date of this Letter of Offer is not meaningful and is not included in this Letter of Offer; and (iii) summary financial statements of IRB KTPL and IRB GTPL for the above period is not meaningful and is not included in this Letter of Offer. For further information, see "Financial Statements" on page 333.

In this section, unless the context otherwise requires, a reference to "we", "us" and "our" refers collectively to the Trust and the Project SPVs.

Overview

The Trust is a registered infrastructure investment trust under the InvIT Regulations. The Portfolio of the Trust comprises 12 toll-road assets in the states of Telangana, West Bengal, Haryana, Uttar Pradesh, Rajasthan, Gujarat, Goa, Maharashtra and Karnataka in India. Three of the other Project SPVs held by the Trust have also entered into concession agreements with the NHAI for the operation of toll road assets and are awaiting the receipt of the appointed date for their projects. These toll roads are operated and maintained pursuant to concessions awarded by the NHAI and other state concessioning authorities.

The Trust has acquired the Portfolio comprised of the Project SPVs from the Sponsor and in the case of PDTPL, IRB GEPL and STPL, holds the Project SPV together with the Sponsor. IRB LTPL, IRB KTPL and IRB GTPL were incorporated by and are held by the Trust. Each of the Project SPVs is an eligible infrastructure project as defined under the InvIT Regulations. As of December 31, 2023, the Project SPVs owned the following toll road assets comprising approximately 8,000 Lane Kilometers of highway:

- The Agra - Etawah NH-2 Project: A 124.52 km section of NH-2 between Agra and Etawah Bypass in Uttar Pradesh which is held by AETL;
- The Gulabpura - Chittorgarh NH-79 Project: A 124.87 km section of NH-79 between Gulabpura and Chittorgarh Bypass in Rajasthan which is held by CGTL;
- The Hapur - Moradabad NH-9 Project: A 99.867 km section of NH-9 between Hapur and Moradabad in Uttar Pradesh which is held by IRB HMTL;
- The Goa - Kundapur NH-17 Project: A 187.28 km section of NH-17 between Goa/Karnataka border and Kundapur in Karnataka which is held by IRB WTL;

- The Kishangarh - Gulabpura NH-79/79A Project: A 90.00 km section of NH-79/79A between Kishangarh and Gulabpura in Rajasthan which is held by KGTL;

- The Kaithal - Rajasthan Border NH-152/65 Project: A 166.259 km section of NH-152/65 between Kaithal and Rajasthan Border in Haryana which is held by KTL;

- The Solapur - Yedeshi NH-211 Project: A 98.717 km section of NH-211 between Solapur and Yedeshi in Maharashtra which is held by SYTL;

- The Udaipur - Rajasthan Border NH-8 Project: A 113.80 km section of NH-8 between Udaipur and Rajasthan Border in Rajasthan and Gujarat which is held by UTL;

- The Yedeshi - Aurangabad NH-211 Project: A 189.09 km section of NH-211 between Yedeshi and Aurangabad in Maharashtra which is held by YATL;

- The Palsit – Dankuni NH-19 Project: A 63.83 km section of NH-19 between Palsit and Dankuni in West Bengal which is held by PDTPL;

- The Nehru Outer Ring Road Project: A 158.00 km section of the Nehru Outer Ring Road in Telangana which is held by IRB GEPL; and

- The Samakhiyali – Santalpur NH-27 Project: A 90.90 km section of NH-27 between Samakhiyali and Santalpur in Gujarat which is held by STPL.

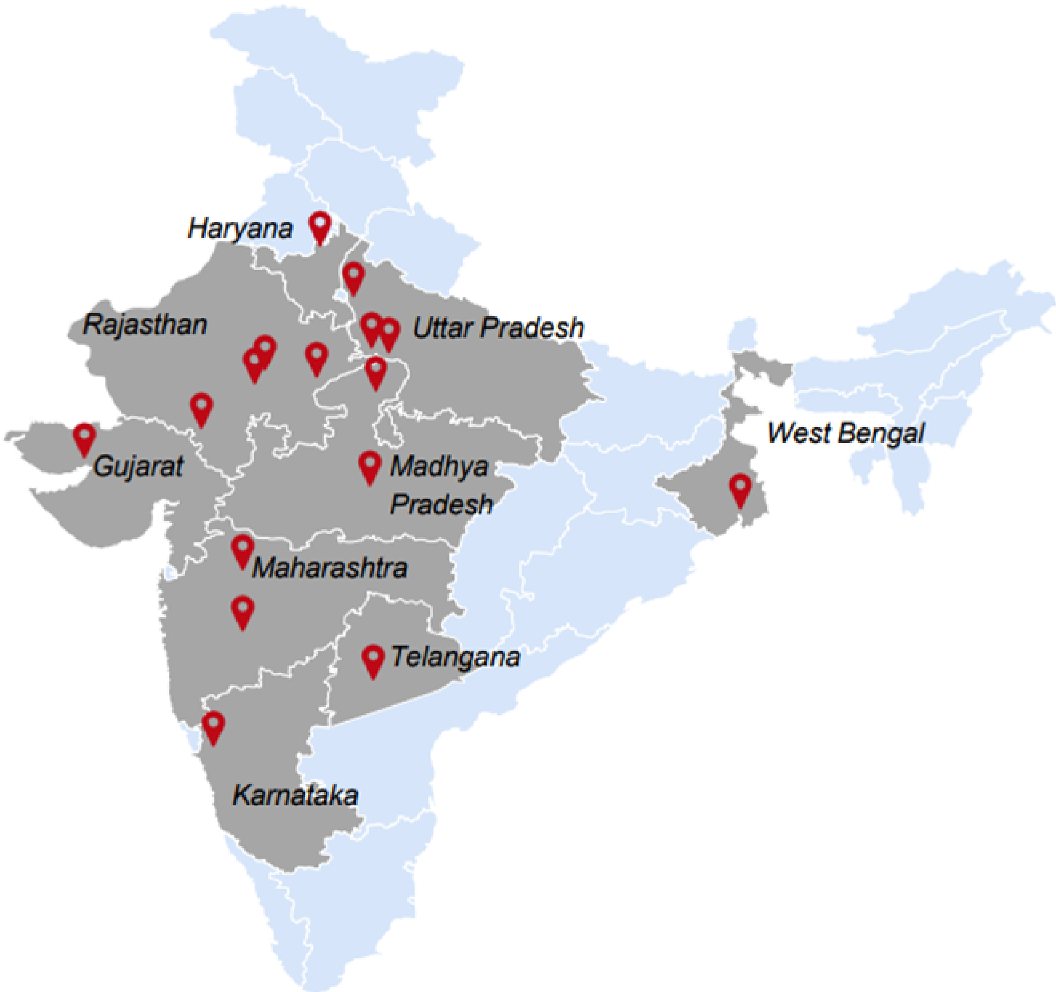
Further, as of the date of this Letter of Offer, certain Project SPVs have entered into concession agreements with the NHAI for the operation of the following toll-road assets:

- The Lalitpur – Lakhnadon NH-44 Project: A 316.08 km section of NH-44 between Lalitpur, Sagar and Lakhnadon in Uttar Pradesh and Madhya Pradesh which will be held by IRB LTPL; and

- The Kota Bypass and Cable Stay Bridge Project: A section of 27.820 km of NH-76 in Rajasthan which will be held by IRB KTPL.

- The Gwalior - Jhansi Project: An 82.455 km section of NH-75 (new NH-44) between Gwalior and Jhansi in the states of Madhya Pradesh and Uttar Pradesh which will be held by IRB GTPL.

The map set out below depicts the location of the Portfolio:



The Sponsor of the Trust is IRB Infrastructure Developers Limited, one of the largest infrastructure development and construction companies in India in terms of net worth in the roads and highways sector according to the NHAI's annual prequalification for public private partnerships in national highway projects report for 2016. The Sponsor has been listed on the Stock Exchanges since 2008. As at December 31, 2023, the Sponsor had six road projects of which two were operational and four were under-construction. The Sponsor also acts as the Project Manager. For further details, see "*The Sponsor and Project Manager*" on page 313.

The Investment Manager of the Trust is MMK Toll Road Private Limited. The Investment Manager has experience in operating a road project for a period of 13 years. 51% of the equity share capital in the Investment Manager is held by the Sponsor and 49% of the equity share capital of the Investment Manager is held by Croxley. Upon the completion of the Cintra Transaction, the Cintra IM Investor is expected to hold 24% of the equity share capital of the Investment Manager. For further details, see "*The Investment Manager*" and "*Corporate Governance*" on pages 317 and 159, respectively.

The Trustee of the Trust is IDBI Trusteeship Services Limited. The Trustee is registered with the SEBI as a debenture trustee under the Debenture Trustees Regulations. For further details, see "*The Trustee*" on page 325.

Competitive Strengths

We believe that our key competitive strengths are as follows:

Portfolio of assets in key growth markets

As on the date of this Letter of Offer, the Trust owns 100% of twelve of the Project SPVs, 99.96% of each of PDTPL and STPL and 99.99% of IRB GEPL. Each of these Project SPVs (except IRB GEPL, IRB LTPL, IRB KTPL and IRB GTPL) is the concessionaire of a BOT toll-road project in India. IRB GEPL, IRB LTPL, IRB KTPL and IRB GTPL are concessionaires of TOT toll-road projects in India.

The Project SPVs' gross toll revenues are set out below:

(₹ in million)

Project SPV	Project	Gross toll revenue in the nine-month period ended December 31, 2023	Gross toll revenue in the nine-month period ended December 31, 2022	Gross toll revenue in the Financial Year 2023	Gross toll revenue in the Financial Year 2022	Gross toll revenue in the Financial Year 2021
KTL	Kaithal - Rajasthan Board NH-152/65 Project	1,080.66	1,136.57	1,504.69	441.10*	701.85*
SYTL	Solapur - Yedeshi NH-211 Project	973.83	947.02	1,295.10	839.58	693.07
YATL	Yedeshi - Aurangabad NH-211 Project	1,939.96	1,864.64	2,555.29	1,612.72	1,315.15
IRB WTL	Goa - Kundapur NH-17 Project	984.83	885.93	1,207.89	851.88	697.90
AETL	Agra - Etawah NH-2 Project	1,785.61	1,636.00	2,199.03	1,896.30	1,230.60
UTL	Udaipur - Rajasthan NH-8 Project	2,153.99	1,866.93	2,528.50	2,003.24	1,177.94
CGTL	Gulabpura - Chittorgarh NH-79 Project	2,745.93	2,534.07	3,445.69	2,276.44	1,402.25
KGTL	Kishangarh - Gulabpura NH-79/79A Project	1,789.84	1,412.16	2,024.38	1,050.58	935.71
IRB HMTL	Hapur - Moradabad NH-9 Project	2,161.78	1,618.92	2,274.59	1,405.59	1,270.85
PDTPL	Palsit-Dankuni NH-19 Project**	1,281.99	1,540.52	2,062.31	-	-
IRB GEPL	Nehru Outer Ring Road Project***	2,724.77	-	-	-	-
STPL	Samakhiyali-Santalpur NH-27 Project@	15.56	-	-	-	-
IRB LTPL	Lalitpur-Sagar-Lakhnadon NH-44 Project$	-	-	-	-	-
IRB GTPL	Gwalior-Jhansi (NH-44) Project$	-	-	-	-	-
IRB KTPL	Kota Bypass and Cable Stay Bridge (NH-76)$	-	-	-	-	-
Total		**19,638.75**	**15,442.76**	**21,097.47**	**12,377.43**	**9,425.32**

** Due to a protest against certain agricultural laws in India, tolling for the Kaithal – Rajasthan project operated by KTL was halted from December 25, 2020. The protest was called off on December 15, 2021 and toll collection resumed from December 16, 2021.*
*** Project commenced toll collection on April 2, 2022.*
**** Project commenced toll collection on August 12, 2023.*
@ Project commenced toll collection on December 28, 2023.
$ As of the date of this Letter of Offer, the project has not received its appointed date from the NHAI and accordingly, toll collection has not commenced for this project.

For further information, see "*Financial Statements*" on page 333.

We believe that the Portfolio assets have growth potential due to expected growth in traffic volumes as a result of regional growth and expected increases in toll fees as a result of inflation adjustments.

Diversified road project portfolio and revenue base

The Portfolio consist of a mix of infrastructure toll road projects spread across several states in India. We believe that the geographic diversity of the Portfolio will play a significant role in developing our experience and expertise, including our ability to evaluate, acquire, operate and maintain new projects.

The Portfolio assets are primarily located along economic corridors and across tourist hubs in India.

The Project SPVs' concession agreements are also temporally diverse in that they commenced and are expected to expire at different times. The concession agreements' residual terms range between 13 years, 10 months and 3 days to 29 years, 7 months and 11 days as at December 31, 2023. IRB LTPL, IRB KTPL and IRB GTPL have not yet received the appointed dates for their respective projects.

We believe that our geographically and temporally diverse project portfolio provides us with an advantage in capitalizing on new opportunities available in the roads and highways sector. We believe that this diversification strengthens our business by reducing our reliance on any specific region or project and reducing the potential impact on our business of any economic slowdown or force majeure event in any particular region or with respect to any particular project.

Experienced Sponsor/Project Manager and Investment Manager with consistent track record in operating and maintaining projects in the roads and highways sector in India

The Sponsor is one of the largest infrastructure development and construction companies in India in terms of net worth in the roads and highways sector according to the NHAI's annual prequalification for public private partnerships in national highway projects report for 2016. As at December 31, 2023, the Sponsor had six road projects of which two were operational and four were under-construction.

The Sponsor also acts as the Project Manager. The Sponsor's BOT project portfolio includes the Ahmedabad Vadodara section of NH 8 and the Ahmedabad Vadodara Expressway and the Meerut Budaun (Group-I) section of Ganga Expressway. The Sponsor's HAM project portfolio includes the under construction Gandeva to Ena project on the Vadodara-Mumbai eight lane expressway, four-laning of Punjab/Himachal Border to Mo Section of NH-154 and the six-laning of Chittoor Thachur road. The Sponsor's TOT project includes the Yashwantrao Chavan Expressway (Mumbai Pune Expressway) and Mumbai – Pune section of NH-48 (old NH-4). The Sponsor has experience in developing road and highway infrastructure and has received various industry awards and recognitions.

The Sponsor/Project Manager has experience in the execution of construction work for roads, highways, and other relevant structures and had a track record of constructing over 18,000 Lane Kilometres of roads and highways as of December 31, 2023.

The Investment Manager has experience in operating a road project for a period of 13 years. 51% of the equity share capital of the Investment Manager is held by the Sponsor and 49% of the equity share capital of the Investment Manager is held by Croxley.

Experienced management team with industry experience

We are managed by qualified personnel of the Investment Manager who have management and operational experience in the roads and highways sector. For further details, see "*The Investment Manager*" on page 317. We believe that the experience and leadership of these teams contribute to our growth and success and position the Portfolio to be operated and managed in an efficient manner.

Attractive sector with strong underlying fundamentals

India is experiencing growing urbanization and rising personal disposable income, resulting in an increase in consumption and discretionary spending. The roads sector registered a strong pace of construction by NHAI, increasing by 6,003 km (16.4 km per day) in financial year 2023 from 3,071 km (8.4 km per day) in financial year 2018. Investment in the roads and highways sector rose from approximately Rs.1.7 trillion in financial year 2018 to approximately Rs.2.9 trillion in financial year 2022, which represents a growth of approximately 1.7x.

The GoI launched the Bharatmala Pariyojana umbrella program in October 2017 for upgrading highway infrastructure (34,800 km in Phase I) with a focus on ease of land acquisition and timely identification of economically important corridors.

Furthermore, under India's Vision 2025, there will be a focus on last-mile connectivity and to tilt asset ownership in favor of financial investors. Road business gets further de-risked with increased transparency and penetration of FASTag for toll collection.

Moreover, favorable concession terms to provide 90% right of way before the appointed date and the reduction of the equity lock-in period post achieving COD, increased the commercial viability of projects for developers and investors.

Investment Strategy and Risk and Capital Management Strategy

Our principal business strategies which are proposed to be implemented by the Investment Manager are set out below:

Organic growth through proactive management

Our principal investment strategy is to proactively manage the Portfolio to support growth. In particular, the Investment Manager will seek to maintain or improve the SPVs' net incomes by, among other initiatives, curbing leakages, conducting proper due diligence, formulating and adopting policies and procedures and structuring investments to address tax or regulatory considerations. The Project Manager will assist the Investment Manager by carrying out the construction, operations, management and maintenance of the project in accordance with the relevant concession agreement and the Project Implementation Agreements and by procuring, operating and maintaining the project's toll management systems, including but not limited to, employing staff for toll collection, monitoring toll collection and providing security arrangements at toll plazas.

The Investment Manager will also focus on minimizing project operating expenses. The roads and highways sector is a highly competitive sector that is capital intensive and requires significant expenditure. Our ability to efficiently manage the costs associated with the Portfolio is critical to maintaining the SPVs' profit margins. The Investment Manager intends to focus on increasing the margins of the SPVs by strengthening internal processes and systems so as to improve utilization of resources and reduce costs. As part of our operations and maintenance systems and processes, the Investment Manager intends to work closely with the Project Manager to promote best practices, to minimize downtime or defects with respect to the Portfolio and to monitor performance of toll booth operators and maintenance contractors. The Investment Manager also intends to work with the Project Manager and the SPVs to upgrade technology as needed, to manage any leakages in toll collections and to streamline collection, route and maintenance operations. With this focus on proactive asset management and operating expense minimization, the Investment Manager hopes to increase our profit margins and achieve long-term growth.

Acquisition and divestment of toll road projects

The Investment Manager intends to expand our portfolio by identifying and selectively bidding for and acquiring additional toll road projects in accordance with the Procurement and Divestment Policy. Pursuant to the Framework Agreement, the Sponsor has agreed to certain arrangements in relation to submission of bids for (i) any new concession by the Sponsor and/or its affiliates involving the development or operation of roads and highways; or (ii) over any extensions of the concession period of road projects held by the Sponsor and/or its affiliates (other than the Project SPVs) with the Financial Investors. For details, see "*Related Party Transactions – Details of Related Party Transactions proposed to be undertaken*" on page 296. The Investment Manager may also consider divestment of certain toll road assets, depending on the maturity and profile of the relevant asset and subject to the Procurement and Divestment Policy. For details of the Procurement and Divestment Policy, see "*Corporate Governance – Policies of the Manager Group*" on page 161.

Optimization of capital structure

The Investment Manager will seek to employ appropriate financing policies and diversify its sources of financing with the objective of minimizing our overall cost of capital. The Investment Manager will ensure compliance with the provisions of the Indenture of Trust, the InvIT Regulations and other applicable law for borrowing. The Investment Manager may also pursue growth opportunities that require raising additional capital through the issuance of new Units.

Details of the Project SPVs and the Portfolio

The Portfolio of the Trust comprises 12 toll-road assets in the states of Telangana, West Bengal, Haryana, Uttar Pradesh, Rajasthan, Gujarat, Goa, Maharashtra and Karnataka in India. These toll roads are operated and maintained pursuant to concessions awarded by the NHAI and other state concessioning authorities. Three of the other Project SPVs held by the Trust have also entered into concession agreements with the NHAI for the operation of toll road assets and are awaiting the receipt of the appointed date for their projects. In relation to the projects for which construction has not been completed, see *"Government and Other Approvals*" on page 715 for information about the status of approvals and "*Risk Factors*" on page 17 for a discussion of risks in relation to delay of completion of the projects.

See "*Summary of the Concession Agreements*" on page 165 for a summary of the key terms of the concession agreements entered into by the Project SPVs with the NHAI.

Details of the Project SPVs are set out below:

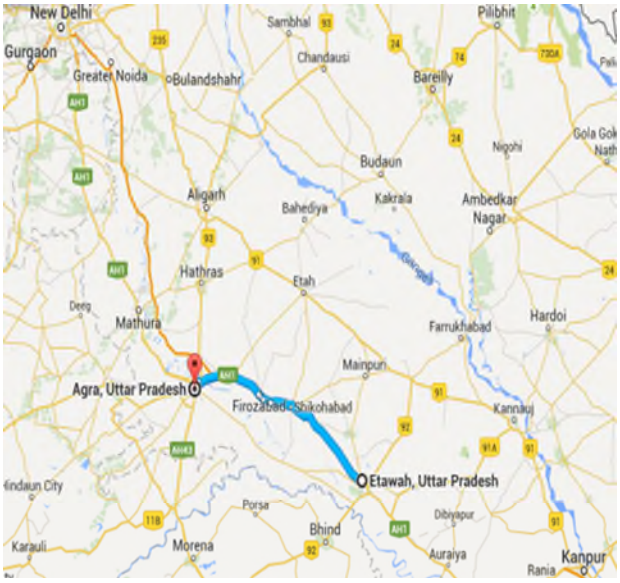
Project SPV	**Project**	**Ownership of Project by the Trust**	**Lane km**	**Commencement of Concession Period**	**Commencement of Toll Collection**	**End of Concession Period**	**Concession Period (years)**	**Percentage of construction completion as at December 31, 2023 (in %)**	**Date of Completion Certificate/ Expected Completion**
AETL	Agra - Etawah NH-2 Project	100%	747	August 1, 2016	August 1, 2016	July 31, 2040	24	N.A.	Received completion certificate dated November 24, 2020
CGTL	Gulabpura - Chittorgarh NH-79 Project	100%	749	November 4, 2017	November 4, 2017	November 3, 2037	20	N.A.	Received completion certificate dated August 14, 2021
IRB HMTL	Hapur - Moradabad NH-9 Project	100%	599	May 28, 2019	May 30, 2019	May 26, 2041	22	100	Received completion certificates dated July 1, 2022 and April 7, 2023
IRB WTL	Goa - Kundapur NH-17 Project	100%	758	March 3, 2014	February 11, 2020	March 2, 2042	28	99	Received a third provisional completion certificate dated March 24, 2023
KGTL	Kishangarh - Gulabpura NH-79/79A Project	100%	540	February 21, 2018	February 21, 2018	February 20, 2038	20	100	Received completion certificate dated July 20, 2022
KTL	Kaithal - Rajasthan Board NH-152/65 Project	100%	665	July 15, 2015	September 8, 2017	July 14, 2042	27	N.A.	Received completion certificate dated March 29, 2019
SYTL	Solapur - Yedeshi NH-211 Project	100%	395	January 21, 2015	March 7, 2018	January 20, 2044	29	N.A.	Received completion certificate dated October 15, 2019

Project SPV	Project	Ownership of Project by the Trust	Lane km	Commencement of Concession Period	Commencement of Toll Collection	End of Concession Period	Concession Period (years)	Percentage of construction completion as at December 31, 2023 (in %)	Date of Completion Certificate/ Expected Completion
UTL	Udaipur - Rajasthan NH-8 Project	100%	683	September 3, 2017	September 3, 2017	September 2, 2038	21	N.A.	Received completion certificate dated May 31, 2021
YATL	Yedeshi - Aurangabad NH-211 Project	100%	756	July 1, 2015	March 17, 2019	June 30, 2041	26	N.A.	Received completion certificate dated September 24, 2020
PDTPL	Palsit – Dankuni NH-19 Project	99.96%	383	April 2, 2022	April 2, 2022	April 1, 2039	17	67.90	Financial Year 2025
IRB GEPL	Nehru Outer Ring Road Project	99.99%	1,264	August 12, 2023	August 12, 2023	August 11, 2053	30	N.A.	N.A.
STPL	Samakhiyali – Santalpur NH-27 Project	99.96%	545	December 28, 2023	December 28, 2023	December 27, 2043	20	Nil**	Financial Year 2026
IRB LTPL	Lalitpur-Lakhnadon NH-44 Project	100%	1,264	-*	-	-	20	N.A.	N.A.
IRB KTPL	Kota Bypass and Cable Stay Bridge (NH-76)	100%	111	-*	-	-	20	N.A.	N.A.
IRB GTPL	Gwalior-Jhansi (NH-44) Project	100%	330	-*	-	-	20	N.A.	N.A.

**As of the date of this Letter of Offer, the project has not received its appointed date from the NHAI and accordingly, the concession period has not commenced for this project.*
***The Project SPV received the appointed date for its project on December 28, 2023.*

A summary of the key features of each Portfolio asset is discussed below.

1. *Agra – Etawah NH-2 Project*



Map of the Agra – Etawah NH-2 Project

On September 1, 2015, the NHAI and AETL entered into a concession agreement in respect of the Agra - Etawah NH-2 Project. AETL was engaged to augment a 124.52 km section of NH-2 between Agra and Etawah in Uttar Pradesh by six-laning on a DBFOT basis. Being a four-laning to six-laning project, the concession period and the collection of toll commenced on August 1, 2016. As per the relevant concession agreement, the Agra - Etawah NH-2 Project comprises the section of NH-2 from km 199.660 to km 323.525. The completion certificate in relation to the project was issued on November 24, 2020.

Corridor description

The Agra - Etawah NH-2 Project is a 124.52 km six-lane road, forming part of the section between Agra and Etawah in Uttar Pradesh. The Agra - Etawah NH-2 Project passes through the cities of Agra, Firozabad, and Etawah in the state of Uttar Pradesh and settlements *en-route* include Agra, Tundla, Firozabad, Shikohabad, Sirsaganj, and Jaswantnagar.

The Agra - Etawah NH-2 Project is a part of the Golden Quadrilateral, that connects Delhi in the north to Kolkata in the east on the NH19 (Old NH2) corridor. The Golden Quadrilateral is the longest road project in India and the fifth-longest highway in the world, connecting four major cities: Delhi, Mumbai, Chennai, and Kolkata. The Agra - Etawah NH-2 Project also connects large industrial and urban clusters of Kanpur and Lucknow to Delhi and Mathura.

The Agra - Etawah NH-2 Project facilitates east-west movement primarily between the eastern states and southern parts of Delhi NCR and Rajasthan. The Delhi-Lucknow corridor is an important traffic contributor. The corridor has a mix of both industrial and agricultural activities. Industries like leather and textile are located Agra and Kanpur, brass manufacturing in Moradabad, special economic zones based industrial development Rudrapur/Rampur area (in the state of Uttarakhand) and glass based manufacturing located in Firozabad are some of industrial settlements in the region. According to the Traffic Reports, a section of NH-2 from Agra to Etawah is part of major transportation link in the area connecting industrial cities of Agra- Kanpur and Lucknow. Important cities of Firozabad, Shikohabad and Jaswant Nagar fall on project alignment.

Concession period and revenue sharing arrangement

The NHAI granted AETL a concession for a period of 24 years for this project. The concession period commenced on August 1, 2016 and is expected to expire on July 31, 2040. AETL began collecting toll with respect to this project on August 1, 2016.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause AETL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires AETL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is April 1, 2025 and 52,995 PCUs, respectively.

In consideration of the grant of concession, AETL pays the NHAI a concession fee of ₹1 per annum. Additionally, AETL was required to pay on the appointed date a premium in the form of an additional concession fee equal to ₹810 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year of the concession period, the premium is determined by increasing the amount of premium in the respective year by an additional 5% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	**Toll revenue (₹ in millions)**
January 2024	191.24
February 2024	203.33

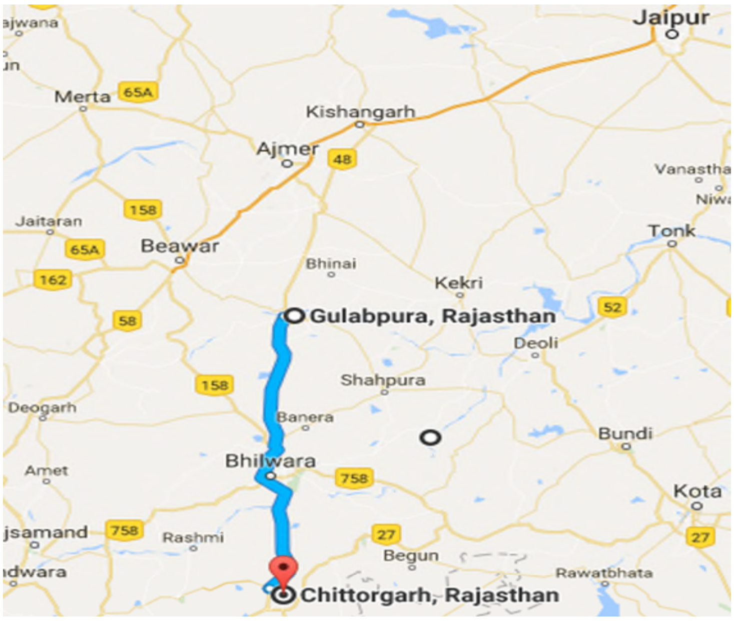
Land

The NHAI owns the land that underlies the Agra - Etawah NH-2 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 92.

2. *Gulabpura – Chittorgarh NH-79 Project*



Map of the Gulabpura – Chittorgarh NH-79 Project

On December 9, 2016, the NHAI and CGTL entered into a concession agreement in respect of the Gulabpura - Chittorgarh NH-79 Project. CGTL was engaged to augment a 124.87 km section of NH-79 between Gulabpura and Chittorgarh in Rajasthan by six-laning on a DBFOT basis. Being a four-to-six-laning project, the concession period and the collection of toll commenced on November 4, 2017. As per the relevant concession agreement, the Gulabpura - Chittorgarh NH-79 Project comprises the section of NH-79 from km 90.00 to km 214.870. The completion certificate in relation to the project was issued on August 14, 2021.

Corridor description

The Gulabpura - Chittorgarh NH-79 Project is an 124.87 km six-lane toll road on NH48 located in Rajasthan and forms part of the Delhi-Mumbai arm of the Golden Quadrilateral. It is also a part of the direct link between Kishangarh-Bhilwara and Chittorgarh.

The Gulabpura - Chittorgarh NH-79 Project forms part of the Golden Quadrilateral NH48 corridor. The key cities of Delhi, Ahmedabad, Vadodara, and Mumbai are connected by NH48. According to the Traffic Reports, the NH-79 is important link for traffic connecting Delhi, Jaipur to Udaipur, Chittorgarh and down south. According to the Traffic Reports, It is one of the major north-south road connectivity for the traffic from northern states of Haryana, Punjab and Delhi to Industrial and tourist areas of Rajasthan like Jaipur, Chittorgarh, Udaipur and then to Dahod, Ratlam and other parts of Madhya Pradesh.

The Gulabpura - Chittorgarh NH-79 Project serves long-distance traffic travelling between Delhi and Ahmedabad (and the south). The Gulabpura - Chittorgarh NH-79 Project also caters to the demand of local movements between Bhilwara, Chittorgarh and Udaipur in addition to medium distance movements between Bhilwara, Ahmedabad, industrial towns in Gujarat (such as Morbi, Kandla and Mundra). The presence of various tourism centres such as Chittorgarh also contributes to tourism activity.

Concession period and revenue sharing arrangement

The NHAI granted CGTL a concession for a period of 20 years for this project. The concession period commenced on November 4, 2017 and is expected to expire on November 3, 2037. Being a four-to-six-laning project, CGTL began collecting toll with respect to this project on November 4, 2017. The completion certificate in relation to the project was issued on August 14, 2021.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than

2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause CGTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires CGTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is June 1, 2026 and 76,316 PCUs, respectively.

In consideration of the grant of concession, CGTL pays the NHAI a concession fee of ₹1 per annum. Additionally, after the third anniversary of the COD, CGTL is required to pay a premium in the form of an additional concession fee equal to ₹2,286.00 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year until the ninth anniversary of the COD, the premium will be determined by increasing the amount of premium in the respective year by an additional 3% as compared to the immediately preceding year, and for each subsequent year of the concession period, the premium will be determined by increasing the amount of premium in the respective year by an additional 8% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	**Toll revenue (₹ in millions)**
January 2024	300.31
February 2024	308.35

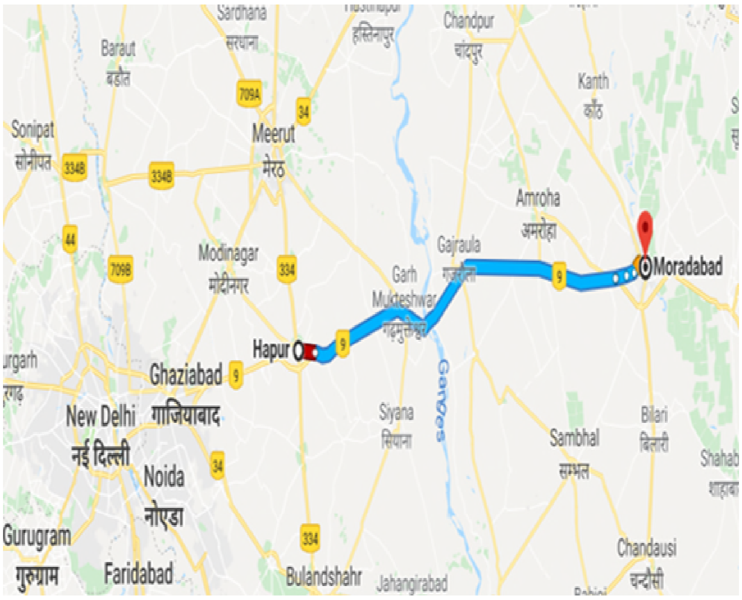
Land

The NHAI owns the land that underlies the Gulabpura - Chittorgarh NH-79 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 92.

3. *Hapur – Moradabad NH-9 Project*



Map of the Hapur - Moradabad NH-9 Project

On May 29, 2018, the NHAI and IRB HMTL entered into a concession agreement in respect of the Hapur – Moradabad NH-9 Project. IRB HMTL was engaged to augment a 99.867 km section of NH-9 between Hapur and Moradabad in Uttar Pradesh by six laning on a DBFOT basis. The concession period and the collection of tolls commenced on May 28, 2019 and May 30, 2019, respectively. As per the relevant concession agreement, the Hapur – Moradabad NH-9 Project comprises the section of NH-9 from km 50.00 to km 148.277. Completion certificates in relation to the project were issued on July 1, 2022 and April 7, 2023.

Corridor description

The Hapur-Moradabad NH-9 Project is 99.867 km six-lane highway currently under capacity expansion from four lanes to six lanes located in Uttar Pradesh. The Hapur-Moradabad NH-9 Project is part of the NH9 corridor that connects Delhi to Moradabad and lies on the Delhi-Lucknow corridor. It is also part of the direct link between the northern states and east India and Nepal. It also connects Delhi to the state of Uttarakhand, which is a key tourism and industrial cluster in the country, and to Lucknow which further connects to NH27 for east-west movements.

The section has one end in Moradabad which houses industries including the metal and export business. The west-end of the Hapur-Moradabad NH-9 Project, Hapur, has medium and small-scale industries including paper, textiles, and steel tube production. Hapur is an important commercial centre for grains, jiggery and potato. Apart from catering to the Agra-Lucknow corridor and the long-distance movement between the northern and eastern states, the Hapur-Moradabad NH-9 Project is a key route for the tourist movements towards Uttarakhand from Delhi and Western Uttar Pradesh. Religious places along the route such as Brijghat and Garh Mukteshwar also attract tourist traffic.

The Hapur-Moradabad NH-9 Project facilitates east-west movement primarily between the eastern states/Uttarakhand/Nepal and Haryana/Punjab/ northern Rajasthan. The Delhi-Lucknow corridor is an important traffic contributor. The corridor has a mix of both industrial and agricultural activities. Industries like leather and textile are located Agra and Kanpur, brass manufacturing in Moradabad, special economic zones based industrial development Rudrapur/Rampur area (in the state of Uttarakhand), and glass based manufacturing located in Firozabad as some of industrial settlements in the region. According to the Traffic Reports, induced traffic from the developments around Hapur-Moradabad NH-9 Project corridor will be a positive contributing factor to the traffic growth on the project corridor.

Concession period and revenue sharing arrangement

The NHAI granted IRB HMTL a concession for a period of 22 years for this project. The concession period commenced on May 28, 2019 and is expected to expire on May 26, 2041. Being a four-to-six-laning project, IRB HMTL began collecting toll with respect to this project on May 30, 2019.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause IRB HMTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires IRB HMTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is April 1, 2028 and 67,413 PCUs, respectively.

In consideration of the grant of concession, IRB HMTL pays the NHAI a concession fee of ₹1 per annum. Additionally, after the third anniversary year of the COD, IRB HMTL is required to pay a premium in the form of an additional concession fee equal to ₹315.00 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the premium will be determined by increasing the amount of premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the concession period, the premium will be determined by increasing the amount of premium in the respective year by an additional 8% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	**Toll revenue (₹ in millions)**
January 2024	230.57
February 2024	237.15

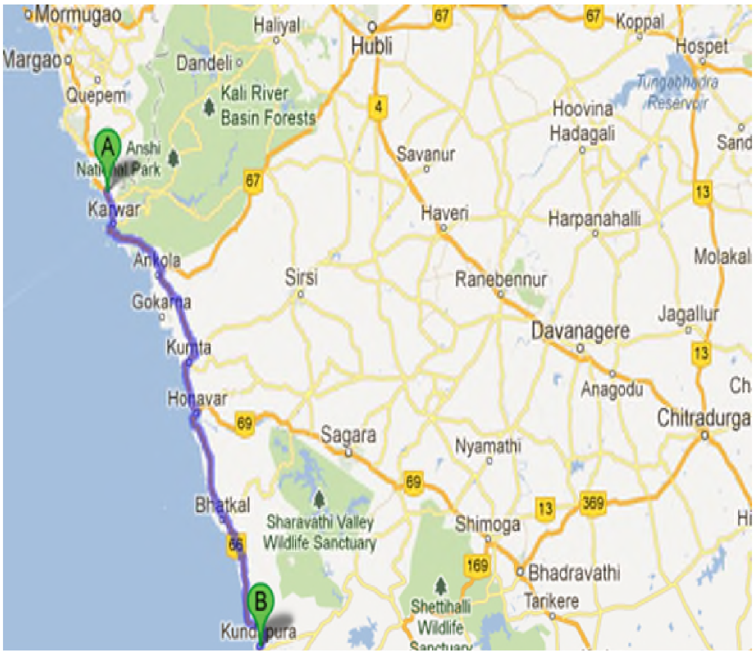
Land

The NHAI owns the land that underlies the Hapur – Moradabad NH-9 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 93.

4. ***Goa – Kundapur NH-17 Project***



Map of the Goa – Kundapur NH-17 Project

On March 25, 2013, the NHAI and IRB WTL entered into a concession agreement in respect of the Goa – Kundapur NH-17 Project. IRB WTL was engaged to augment a 187.28 km section of NH-17 between Goa and Kundapur in Karnataka by four-laning on a DBFOT basis. The concession period commenced on March 3, 2014. As per the relevant concession agreement, the Goa – Kundapur NH-17 Project comprises the section of NH-17 from km 93.700 to km 283.300. Provisional completion certificates in relation to the project were issued on January 31, 2020, February 28, 2022 and March 24, 2023.

Corridor description

The Goa – Kundapur NH-17 Project is situated in the state of Karnataka, connecting Goa-Karnataka border to Kundapur in the south. The Goa – Kundapur NH-17 Project forms part of Panvel-Kochi-Kanyakumari Highway (NH66) on the west coast of India.

Some of the key urban centers along the Goa – Kundapur NH-17 Project are Ankola, Bhatkal, Kumta and Karwar. The highway facilitates the north-south movement as it connects Maharashtra in the north to Kerala in the south.

Kumta, Murdeshwar and Shivamogga are major religious and recreational tourism centres in the region and contribute to tourism traffic. Apart from these tourism-related cities, the Goa – Kundapur NH-17 Project generates tourism on its own as the highway runs parallel to the Arabian Sea. The port of Mangalore which is located 90 km south of Kundapur is a major commercial traffic generator. Coal traffic also moves from Mangalore port to Bagalkotti, Bijapur and Gulbarga. The Belekeri plaza to the north of the Goa – Kundapur NH-17 Project has agricultural activity and hosts a naval base.

Concession period and revenue sharing arrangement

The NHAI granted IRB WTL a concession for a period of 28 years for this project. The concession period commenced on March 3, 2014 and is expected to expire on March 2, 2042. IRB WTL commenced tolling on February 11, 2020.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause IRB WTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires IRB WTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is April 1, 2022 and 21,307 PCUs, respectively.

In consideration of the grant of concession, IRB WTL pays the NHAI a concession fee of ₹1 per annum.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
January 2024	121.19
February 2024	106.58

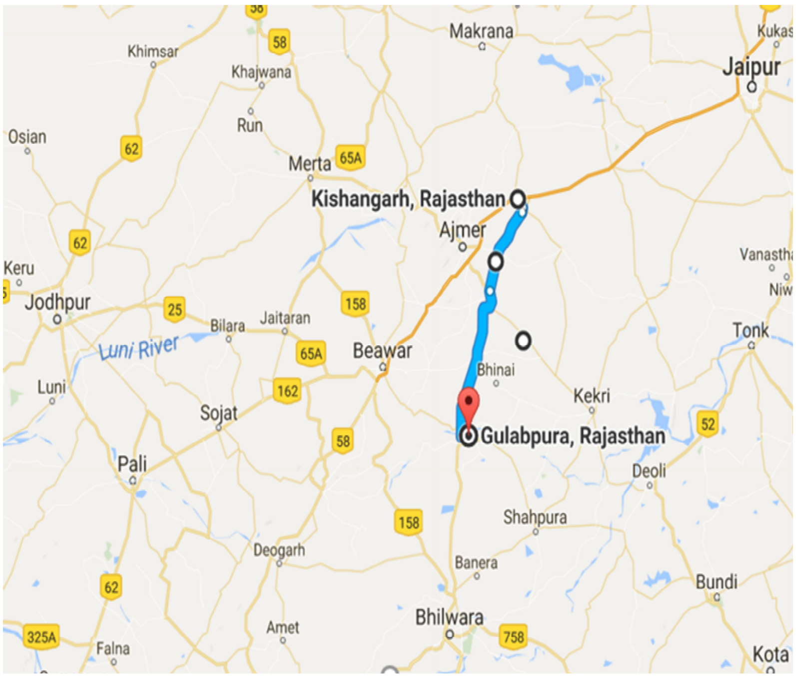
Land

The NHAI owns the land that underlies the Goa – Kundapur NH-17 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 94.

5. *Kishangarh – Gulabpura NH-79/79A Project*



Map of the Kishangarh – Gulabpura NH-79/79A Project

On February 22, 2017, the NHAI and KGTL entered into a concession agreement in respect of the Kishangarh – Gulabpura NH-79/79A Project. KGTL was engaged to augment a 90.00 km section of NH-79/79A between

Kishangarh and Gulabpura in Rajasthan by six-laning on a DBFOT basis. Being a four-to-six-laning project, the concession period and the collection of toll commenced on February 21, 2018. As per the relevant concession agreement, the Kishangarh – Gulabpura NH-79/79A Project comprises the section of NH-79/79A from km 0.000 to km 90.000. The completion certificate in relation to the project was issued on July 20, 2022.

Corridor description

The Kishangarh – Gulabpura NH-79/79A Project is a 90 km stretch on NH48 between Kishangarh and Gulabpura in Rajasthan. The project is located in Rajasthan and forms part of the Delhi-Mumbai arm of the Golden Quadrilateral. It is also part of the direct link between Kishangarh-Bhilwara and Chittorgarh.

The Kishangarh – Gulabpura NH-79/79A Project connects Ajmer to Gulabpura, traversing through major settlement stretches such as Gulabpura, Bhilwara, Chittorgarh, Mangalwad, and finally Udaipur. The Kishangarh – Gulabpura NH-79/79A Project primarily serves traffic travelling between Delhi, Rajasthan, Gujarat, Maharashtra and Southern states (Kerala, Tamil Nadu, Karnataka). There are also several textile industries and marble/granite industries bordering the Kishangarh – Gulabpura NH-79/79A Project. According to the Traffic Reports, major mining industries of marble, Zink, felspar, quarts of Udaipur and textile industry of Bhiwara provide are major contributor of commercial traffic on project corridor. Additionally Jaipur, Ajmer, Udaipur, Chittorgarh and Bhilwara major tourist centers of India. This adds substantial value for passenger traffic on the project corridor section.

Concession period and revenue sharing arrangement

The NHAI granted KGTL a concession for a period of 20 years for this project. The concession period commenced on February 21, 2018 and is expected to expire on February 20, 2038. KGTL began collecting toll with respect to this project on February 21, 2018.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause KGTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires KGTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is May 1, 2026 and 76,236 PCUs, respectively.

In consideration of the grant of concession, KGTL pays the NHAI a concession fee of ₹1 per annum. Additionally, after the third anniversary year of the COD, KGTL is required to pay a premium in the form of an additional concession fee equal to ₹1,863.00 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the premium will be determined by increasing the amount of premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the concession period, the premium will be determined by increasing the amount of premium in the respective year by an additional 8% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
January 2024	189.64
February 2024	195.71

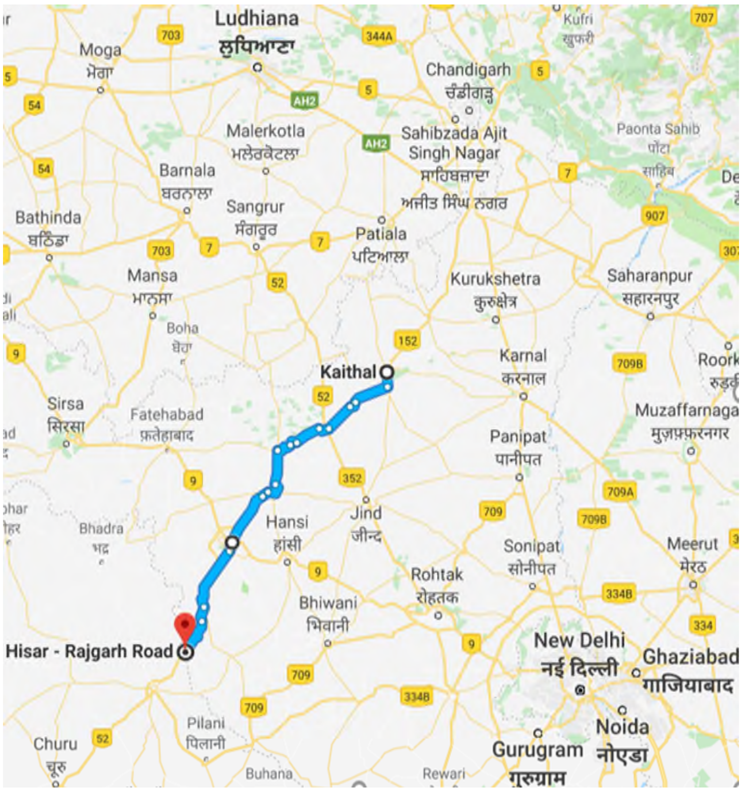
Land

The NHAI owns the land that underlies the Kishangarh – Gulabpura NH-79/79A Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 95.

6. *Kaithal – Rajasthan Border NH-152/65 Project*



Map of the Kaithal – Rajasthan Border NH-152/65 Project

On June 23, 2014, the NHAI and KTL entered into a concession agreement in respect of the Kaithal – Rajasthan Border NH-152/65 Project. KTL was engaged to augment a 166.259 km section of NH-152/65 between Kaithal and Rajasthan Border in Haryana by four-laning on a DBFOT basis. The concession period commenced on July 15, 2015 and the collection of toll commenced on September 8, 2017. As per the relevant concession agreement, the Kaithal - Rajasthan Border NH-152/65 Project comprises the section of NH-152/65 from km 33.250 to km 241.580. Provisional completion certificates dated September 6, 2017 and July 9, 2018 and a completion certificate dated March 29, 2019 have been issued in relation to the project.

Corridor description

The Kaithal - Rajasthan Border NH-152/65 Project is an 166.259 km long four-lane section connecting Kaithal and Haryana-Rajasthan border in the state of Haryana. The Kaithal - Rajasthan Border NH-152/65 Project is part of the NH-52 corridor connecting northern states including Haryana, Punjab, and Himachal Pradesh with Rajasthan and Gujarat in the west.

The areas surrounding the Kaithal - Rajasthan Border NH-152/65 Project is predominantly agricultural along with dairy related activities. According to the Traffic Reports, the project road forms part of an important transportation corridor which connects northern states like Haryana, Punjab and Himachal Pradesh to southern states and development centers on the west coast line of India.

Concession period and revenue sharing arrangement

The NHAI granted KTL a concession for a period of 27 years for this project. The concession period commenced on July 15, 2015 and is expected to expire on July 14, 2042. KTL began collecting toll with respect to this project on September 8, 2017.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause KTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires KTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume set out in the concession agreement is April 1, 2023 and 21,919 PCUs, respectively.

In consideration of the grant of concession, KTL pays the NHAI a concession fee of ₹1 per annum.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
January 2024	116.73
February 2024	109.53

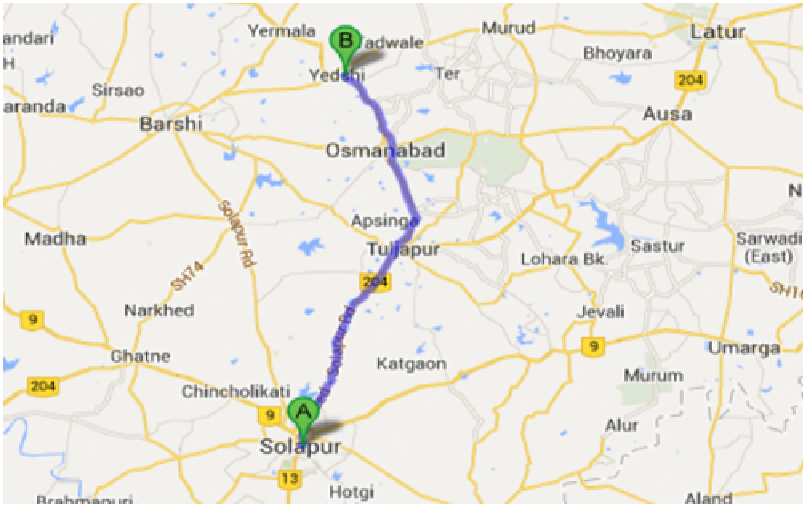
Land

The NHAI owns the land that underlies the Kaithal – Rajasthan Border NH-152/65 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 96.

7. *Solapur – Yedeshi NH-211 Project*



Map of the Solapur - Yedeshi NH-211 Project

On March 3, 2014, the NHAI and SYTL entered into a concession agreement in respect of the Solapur – Yedeshi NH-211 Project. SYTL was engaged to augment a 98.717 km section of NH-211 between Solapur and Yedeshi in Maharashtra by four-laning on a DBFOT basis. The concession period commenced on January 21, 2015 and the collection of toll commenced on March 7, 2018. As per the relevant concession agreement, the Solapur – Yedeshi NH-211 Project comprises the section of NH-211 from km 0.000 to km 100.000. A provisional completion certificate was issued on March 5, 2018. The completion certificate for the project was issued on October 15, 2019.

Corridor description

The Solapur – Yedeshi NH-211 Project is a 98.717 km stretch that forms part of the NH52 north-south corridor. The Solapur – Yedeshi NH-211 Project connects Delhi and northern parts of India with major cities such as Bengaluru, Chennai, Hyderabad in the south. The Solapur – Yedeshi NH-211 Project also caters to east-west movement between Gujarat and eastern states such as Telangana (Hyderabad), Andhra Pradesh (Vijaywada) and parts of Tamil Nadu (Chennai). The Solapur – Yedeshi NH-211 Project has significant areas of industrial influence and tourism influence.

According to the Traffic Reports, the project road forms part of an important transportation corridor which works as gateway to Karnataka and rest of south India for Marathwada region of Maharashtra. It connects Solapur – Dhule and forms an important transportation link for traffic from Vijapur, Hubli and other parts of north Karnataka to Aurangabad, Jalna, Beed and other places in the Marathwada region.

Concession period and revenue sharing arrangement

The NHAI granted SYTL a concession for a period of 29 years for this project. The concession period commenced on January 21, 2015 and is expected to expire on January 20, 2044. SYTL began collecting toll with respect to this project on March 7, 2018.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause SYTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires SYTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is October 1, 2023 and 22,210 PCUs, respectively.

In consideration of the grant of concession, SYTL pays the NHAI a concession fee of ₹1 per annum.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
January 2024	105.90
February 2024	96.31

Land

The NHAI owns the land that underlies the Solapur - Yedeshi NH-211 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 96.

8. *Udaipur - Rajasthan Border NH-8 Project*

Map of the Udaipur – Rajasthan Border NH-8 Project

On December 9, 2016, the NHAI and UTL entered into a concession agreement in respect of the Udaipur - Rajasthan Border NH-8 Project. UTL was engaged to augment a 113.80 km section of NH-8 between Udaipur and Rajasthan Border in Rajasthan and Gujarat by six-laning on a DBFOT basis. Being a four-to-six-laning project, the concession period and the collection of toll commenced on September 3, 2017. As per the relevant concession agreement, the Udaipur - Rajasthan Border NH-8 Project comprises the section of NH-8 from km 287.400 to km 401.200. The completion certificate in relation to the project was issued on May 31, 2021.

Corridor description

The 113.80 km four-lane toll road (NH-48) is located in Rajasthan and forms part of the Delhi-Mumbai arm of the Golden Quadrilateral. It is also part of the direct link between Ahmedabad and Udaipur.

The Udaipur - Rajasthan Border NH-8 Project acts as a funnel for traffic using the northern sections of NH48 section, NH58 (Bhilwara-Rajsamand-Udaipur) section for trips between areas north of Udaipur and Udaipur/Ahmedabad/Mumbai and the south. According to the Traffic Reports, the area around the project stretch from Udaipur to Gujarat border has green marble mines and other establishments. Major religious centres like Shamlaji and Ekling ji contribute to substantial passenger traffic on the project stretch.

Concession period and revenue sharing arrangement

The NHAI granted UTL a concession for a period of 21 years for this project. The concession period commenced on September 3, 2017 and is expected to expire on September 2, 2038. UTL began collecting toll with respect to this project on September 3, 2017.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause UTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires UTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is September 21, 2026 and 61,435 PCUs, respectively.

In consideration of the grant of concession, UTL pays the NHAI a concession fee of ₹1 per annum. Additionally, immediately after the third anniversary year of the COD, a premium in the form of an additional concession fee equal to ₹1,638.00 million is required to be paid by UTL as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the premium will be determined by increasing the amount of premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the concession period, the premium will be determined by increasing the amount of premium in the respective year by an additional 8% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
January 2024	249.57
February 2024	257.09

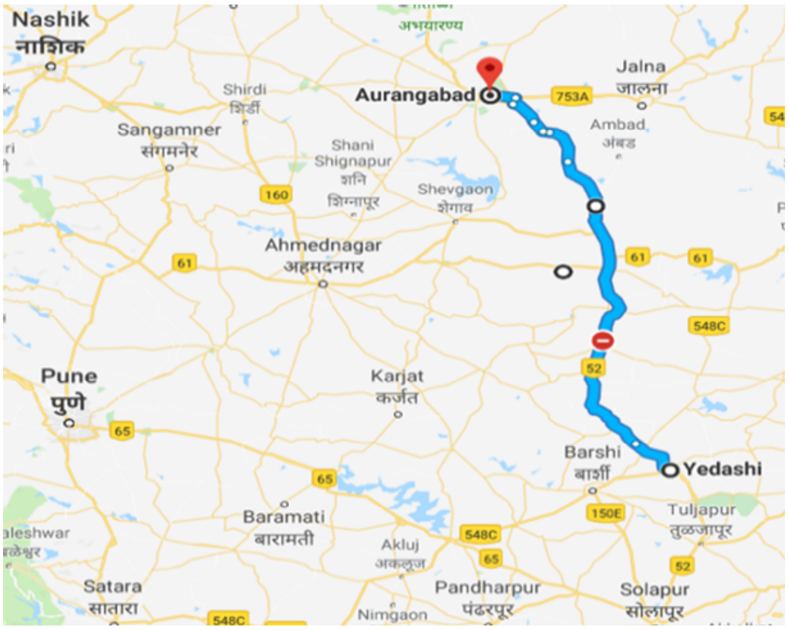
Land

The NHAI owns the land that underlies the Udaipur - Rajasthan Border NH-8 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 97.

9. ***Yedeshi – Aurangabad NH-211 Project***



Map of the Yedeshi - Aurangabad NH-211 Project

On May 30, 2014, the NHAI and YATL entered into a concession agreement in respect of the Yedeshi - Aurangabad NH-211 Project. YATL was engaged to augment a 189.09 km section of NH-211 between Yedeshi and Aurangabad in Maharashtra by four-laning on a DBFOT basis. The concession period commenced on July 1, 2015 and the collection of toll commenced on March 17, 2019. As per the relevant concession agreement, the Yedeshi – Aurangabad NH-211 Project comprises the section of NH-211 from km 100.00 to km 290.200. A provisional completion certificate was issued on March 15, 2019. The completion certificate was issued on September 24, 2020.

Corridor description

The Yedeshi – Aurangabad NH-211 Project forms part of the NH52 north-south corridor. The Yedeshi – Aurangabad NH-211 Project connects Delhi and northern parts of India with major cities such as Bengaluru, Chennai, Hyderabad in the south. The Yedeshi – Aurangabad NH-211 Project also caters to east-west movement between Gujarat and eastern states such as Telangana (Hyderabad), Andhra Pradesh (Vijaywada) and parts of Tamil Nadu (Chennai). The Yedeshi – Aurangabad NH-211 Project has significant areas of industrial influence and tourism influence.

According to the Traffic Reports, the project road passes through important places like Chausala, Beed, Adul, Chitegaon and then Aurangabad. The project road passes through the districts of Beed and Aurangabad.

Concession period and revenue sharing arrangement

The NHAI granted YATL a concession for a period of 26 years for this project. The concession period commenced on July 1, 2015 and is expected to expire on June 30, 2041. YATL began collecting toll with respect to this project on March 17, 2017.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause YATL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires YATL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is October 1, 2023 and 24,407 PCUs, respectively.

In consideration of the grant of concession, YATL pays the NHAI a concession fee of ₹1 per annum.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
January 2024	204.85
February 2024	191.14

Land

The NHAI owns the land that underlies the Yedeshi – Aurangabad NH-211 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 98.

10. Palsit – Dankuni NH-19 Project

Map of the Palsit – Dankuni NH-19 Project

On June 14, 2021, the NHAI and PDTPL entered into a concession agreement in respect of the Palsit – Dankuni NH-19 Project. PDTPL was engaged to augment a section of NH-19 Palsit to Dankuni (upto NH-6 Connector) from KM 588.870 to KM 652.700 (total design length 63.830 km) in West Bengal by six-laning on a BOT (toll) basis. Being a four-laning to six-laning project, the concession period and the collection of toll commenced on April 2, 2022. As per the relevant concession agreement, the Palsit – Dankuni NH-19 Project comprises the section of NH-19 from KM 588.870 to KM 652.700.

Corridor description

The asset is located on National Highway 19 (NH2). NH2 runs over 1,465 km and connects some of the major states of Delhi, Haryana, Uttar Pradesh with the eastern states of Bihar, Jharkhand and West Bengal. The highway also connects Delhi with cities like, Mathura, Agra, Kanpur, Allahabad, Durgapur and later stretches to connect to Kolkata. All these cities have major industrial centres. The asset becomes a key link in connecting Haldia port, in south of the asset, to the rest of West Bengal, Uttar Pradesh, Bihar, Jharkhand, Assam, Arunachal Pradesh, and Nepal. The asset lies in close proximity to state capital, Kolkata, which is one of the key distribution centres and has good connectivity with several parts of the country and generates a significant volume of traffic on the asset. The areas along the asset are agricultural along with industries and warehouse concentrated around urban areas. The key industrial areas include Durgapur, Asansol, Panagarh and Dankuni.

According to the Traffic Reports, section of NH-19 from Palsit to Dankuni is part of a major transportation link in the area connecting industrial cities of Dhanbad, Asansol, Durgapur and Kolkata. The project stretch acts as a gateway link to Kolkata from northern India.

Concession period and revenue sharing arrangement

The NHAI granted PDTPL a concession for a period of 17 years for this project. The concession period commenced on April 2, 2022 and is expected to expire on April 1, 2039. PDTPL began collecting toll with respect to this project on April 2, 2022.

The concession agreement provides that if the actual average traffic falls short of or exceeds the target traffic on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic by more than 5%, the concession period may be reduced by 1.00% for every 1.00% excess in actual average traffic as compared to the target traffic, provided that such reduction in the concession period does not exceed 20% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic by more than 5%, the concession period may be extended by 1.00% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that if the average daily traffic exceeds the design capacity in any accounting year, an indirect political event under the concession agreement will be deemed to have occurred and the NHAI may, at its discretion, terminate the concession agreement. If PDTPL has completed the construction works necessary for augmenting the capacity of the project such that its capacity has increased sufficiently for carrying the then current traffic, prior to the issue of a termination notice by the NHAI, the indirect political event will deemed to have been cured.

For this project, the target dates are expected to be May 1, 2026, May 1, 2031 and May 1, 2036. The target traffic on these dates is expected to be 65,830 PCUs, 84,018 PCUs and 107,270 PCUs, respectively, and the actual average traffic will be derived based on the procedures prescribed by the NHAI in accordance with the concession agreement.

In consideration of the grant of concession, PDTPL pays the NHAI a concession fee of ₹1 per annum. Additionally, immediately after the first anniversary of the project completion date, a premium in the form of an additional concession fee for every year of the remaining concession period is payable by PDTPL. The premium to be paid for the second year after the project completion date is equal to 10.8% of the realisable fee and is required to be paid by PDTPL as due to the NHAI during that year. For subsequent years, the premium will be determined based on the total realisable fee in the respective year at the percentage to be arrived at by increasing the percentage of premium in the respective year by an additional 1% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
January 2024	147.31
February 2024	149.65

Land

The NHAI owns the land that underlies the Palsit – Dankuni NH-19 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 99.

11. Hyderabad ORR Project

On May 26, 2023, IRB GEPL and the Sponsor entered into a concession agreement with the HMDA and HGCL in respect of the Hyderabad ORR Project. IRB GEPL was engaged to implement the tolling, operation, maintenance and management of Nehru Outer Ring Road (from Km 0+000 to Km 158+000) in Hyderabad, Telangana on a toll-operate-transfer basis. The concession period for the project commenced on August 12, 2023 and collection of toll commenced on August 12, 2023.

Corridor description

The Nehru Outer Ring Road is a 158 km, 8-lanes ring road expressway encircling Hyderabad, Telangana and provides fast connectivity to various radial state and national highways connecting to Mumbai, Nagpur, Karimnagar, Warangal, Suryapet, Vijayawada, Bengaluru. The expressway is fenced and 33 radial roads connect it with the Inner Ring Road. A large part, 124 km (covering urban nodes viz., Hi-Tech city, Nanakramguda Financial District, Rajiv Gandhi International Airport, IKP Knowledge park, Hardware Park, Telangana State Police Academy, Singapore Financial District, and Games village) of the 158-km was opened by December 2012. Rest of the length of the asset was opened to traffic in years 2015-16 and has contributed to a great extent to not only to ease out traffic flow, but also influenced the development of Hyderabad around the Outer Ring Road.

According to the Traffic Reports, the Nehru Outer Ring Road gives easy connectivity between NH-44, NH-65, NH-161, NH-765 and NH-163 from Hyderabad to Vijayawada and Warangal as well as state highways leading to Vikarabad Nagarjuna Sagar and Karimnagar / Mancherial. This has also helped in reducing the travel time from Rajiv Gandhi International Airport to cities like Nizamabad and Adilabad.

Concession period and revenue sharing arrangement

The HMDA has granted IRB GEPL a concession for a period of 30 years commencing from the appointed date for the project. The concession period commenced on August 12, 2023 and is expected to expire on August 11, 2053. IRB GEPL began collecting toll with respect to this project on August 12, 2023.

The concession agreement provides that if the average of the actual toll revenue collected by IRB GEPL over certain specified time periods falls short of or exceeds the target revenue for such periods (being ₹1,731.80 million and ₹4,482.5 million, respectively) by more than 20% or 30%, then for every 1% shortfall or increase as compared to the target revenue, the concession period shall be increased by 1.5% or decreased by 0.75% thereof, subject to the limits specified in the concession agreement. The concession agreement also states that in the event that the HMDA requires IRB GEPL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

In consideration of the grant of concession, IRB GEPL is required to pay the HMDA a concession fee of ₹73,800 million.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
January 2024	592.60
February 2024	589.16

Land

The HMDA owns the land that underlies the Nehru Outer Ring Road Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 100.

12. Samakhiyali – Santalpur NH-27 Project

On May 12, 2023, the NHAI and STPL entered into a concession agreement in respect of the Samakhiyali - Santalpur NH-27 Project. STPL was engaged for upgradation to six lane with paved shoulder of NH-27 from Samakhiyali to Santalpur section from KM 339+200 to KM 430+100 in the state of Gujarat to be executed on a design, build, finance, operate and transfer basis, for a period of 20 years, from December 28, 2023.

Corridor description

Samakhiyali – Santalpur is approximately 90.90 km long 4-lane National Highway Section on NH-27 in the state of Gujarat. NH-27 which is basically east west connector of country.

The project stretch from is gateway link for both the ports of Mundra and Kandla and also of Saurashtra region. The stretch is having combined traffic of NH-27 which is coming from Palanpur / Radhanpur Abu Road and northern link from north Indian states via NH-68 and small section of SH-127 from Suigaon to Sidhadha on project highway. On north of project stretch lies great Rann of Kutch which is emerging as important tourist destination of area.

Concession period and revenue sharing arrangement

The NHAI granted STPL a concession for a period of 20 years for this project. The concession period commenced on December 28, 2023 and is expected to expire on December 27, 2043. STPL began collecting toll with respect to this project on December 28, 2023.

The concession agreement provides that in the event actual average traffic falls short of the target traffic by more than 5% (five percent), then for every 1% (one percent) shortfall as compared to the target traffic, the cconcession period will be, subject to payment of concession fee and additional concession fee in accordance with the concession agreement, be increased by 1% (one percent) thereof; provided that such increase in concession period shall not in any case exceed 20% (twenty percent) of the concession period. In the event actual average traffic exceeds the target traffic by more than 5% (five percent), then for every 1% (one percent) increase as compared to the target traffic, the concession period shall be reduced by 1% (one percent) thereof; provided that such reduction in concession period shall not in any case exceed 20% (twenty percent) of the concession period. In the event the average daily traffic of PCUs in any accounting year exceeds the designed capacity of the project highway, an indirect political event under the concession agreement will be deemed to have occurred and the NHAI may, at its discretion, terminate the concession agreement. If STPL completes the construction works necessary for augmenting the capacity of the project highway such that its capacity has increased sufficiently for carrying the then current traffic in accordance with the corresponding provisions of the relevant Indian Roads Congress publication, prior to the issue of a termination notice by the NHAI, the indirect political event will deemed to have been cured.
For this project, the target dates are expected to be October 1, 2028, October 1, 2033 and October 1, 2038. The target traffic on these dates is expected to be 58,741 PCUs, 74,971 PCUs and 95,681 PCUs, respectively, and the actual average traffic will be derived based on the procedures prescribed by the NHAI in accordance with the concession agreement.

In consideration of the grant of concession, STPL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum. Additionally, immediately after the first anniversary of the project completion date, a premium in the form of an additional concession fee for every year of the remaining concession period is payable by STPL. The premium to be paid for the second year after the project completion date is equal to 42.84% of the realisable fee and is required to be paid by STPL as due to the NHAI during that year. For subsequent years, the premium will be determined based on the total realisable fee in the respective year at the percentage to be arrived at by increasing the percentage of premium in the respective year by an additional 1% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
January 2024	118.02
February 2024	120.48

Land

The NHAI owns the land that underlies the Samakhiyali - Santalpur NH-27 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 101.

13. Lalitpur-Sagar-Lakhnadon NH-44 Project

On November 24, 2023, the NHAI and IRB LTPL entered into a concession agreement in respect of the Lalitpur – Sagar – Lakhnadon NH-44 Project. IRB LTPL was engaged for the tolling, operation, management, maintenance and transfer of four lane Lalitpur-Sagar-Lakhnadon section of NH-44 (from Km 99.005 to Km 415.089) in Uttar Pradesh and Madhya Pradesh to be executed on a toll-operate-transfer basis, for a period of 20 years, from the appointed date under the concession agreement.

Corridor description

Lalitpur – Sagar – Lakhnadon Project is a section of NH-44, which is the longest National Highway in the country, running through North, Central and South India. It starts from Jammu & Kashmir and passes through the states of Punjab, Haryana, Delhi, Uttar Pradesh, Rajasthan, Madhya Pradesh, Maharashtra, Telangana, Andhra Pradesh, Karnataka and Tamil Nadu.

The project stretch under this study starts from km 99.005 of NH-44 at Lalitpur in the state of Uttar Pradesh and ends at km 415.089 of NH-44 at Lakhnadon in the state of Madhya Pradesh. The length of project stretch is 316.084 km and has 4-lane configuration with four number of toll plazas.

Concession period and revenue sharing arrangement

The NHAI granted IRB LTPL a concession for a period of 20 years for this project. The concession period for the project shall commence from the appointed date under the concession agreement.

The concession agreement provides that if the average of the actual toll revenue collected by IRB LTPL over certain specified time periods ("**Target Points**") falls short of or exceeds the target revenue for such periods (being ₹700.20 million and ₹1,225.10 million, respectively) by more than 20% or 30%, then for every 1% shortfall or increase as compared to the target revenue, the concession period shall be increased by 1.5% or decreased by 0.75% thereof, subject to the limits specified in the concession agreement. The concession agreement also states that in the event that the NHAI requires IRB LTPL to undertake capacity augmentation, there will be no modification in the Target Points under the concession agreement.

In consideration of the grant of concession, IRB LTPL shall pay to the NHAI in accordance with terms of the concession agreement and prior to the appointed date, a lumpsum upfront concession fee of an amount equivalent to ₹44.28 billion.

Monthly toll revenue

As of the date of this Letter of Offer, IRB LTPL has not received the appointed date for its project. Accordingly, the toll revenue of IRB LTPL is nil.

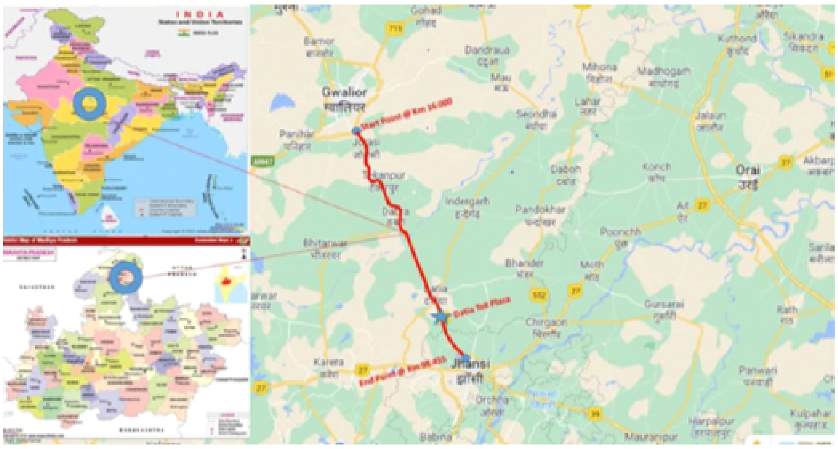
Land

The NHAI owns the land that underlies the Lalitpur – Sagar – Lakhnadon NH-44 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 101.

14. Gwalior-Jhansi (NH-44) Project



On January 12, 2024, the NHAI and IRB GTPL entered into a concession agreement in respect of the IRB GTPL Project. GTPL was engaged for the tolling, operation, management, maintenance and transfer of the Gwalior-Jhansi section from km 0.00 (revised km 16.00) to km 103.00 (revised km 98.455) of NH-75 (New NH-44) in the Madhya Pradesh and Uttar Pradesh to be executed on a toll-operate-transfer basis, for a period of 20 years, from the appointed date under the concession agreement.

Corridor description

Gwalior – Jhansi (NH-44) Project is a section of NH-44, which is the longest National Highway in the country, running through North, Central and South India. A major part of the project section from Gwalior to Jhansi Road lies in Gwalior and Datia district of Madhya Pradesh followed by Jhansi district. The major towns along the project corridor are Gwalior, Tekampur, Dabra, Datia and Jhansi.

The project stretch starts from km 16.000 of NH-44 at Gwalior in the state of Madhya Pradesh and ends at km 98.455 of NH-44 at Jhansi in the state of Uttar Pradesh.

Concession period and revenue sharing arrangement

The NHAI granted IRB GTPL a concession for a period of 20 years for this project. The concession period for the project shall commence from the appointed dated under the concession agreement.

The concession agreement provides that if the average of the actual toll revenue collected by IRB GTPL over certain specified time periods ("**Target Points**") falls short of or exceeds the target revenue for such periods (being ₹170.90 million in the month of March 2031 and ₹306.80 million in the month of March 2038, respectively) by more than 20% or 30%, then for every 1% shortfall or increase as compared to the target revenue, the concession period shall be increased by 1.5% or decreased by 0.75% thereof, subject to the limits specified in the concession agreement. The concession agreement also states that in the event that the NHAI requires IRB GTPL to undertake capacity augmentation, there will be no modification in the Target Points under the concession agreement.

In consideration of the grant of concession, IRB GTPL shall pay to the NHAI in accordance with terms of the concession agreement and prior to the appointed date, a lumpsum upfront concession fee of an amount equivalent to ₹11.61 billion.

Monthly toll revenue

As of the date of this Letter of Offer, IRB GTPL has not received the appointed date for the IRB GTPL Project. Accordingly, the toll revenue of IRB GTPL is nil.

Land

The NHAI owns the land that underlies the IRB GTPL Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 103.

15. Kota Bypass and Cable Stay Bridge (NH-76) Project

On January 12, 2024, the NHAI and IRB KTPL entered into a concession agreement in respect of the IRB KTPL Project. IRB KTPL was engaged for the tolling, operation, management, maintenance and transfer of the Kota Bypass and Cable Stay Bridge on NH-76 in Rajasthan to be executed on a toll-operate-transfer basis, for a period of 20 years, from the appointed date under the concession agreement.

Corridor description

The Kota Bypass section is located on NH-27 and includes a Cable-Stayed Bridge on the Chambal River in the State of Rajasthan. Kota Bypass is part of NH-27 which is major East – West connectivity in India. The most of the traffic on Kota Bypass is either local in nature or is part of East – West connectivity corridor. Gwalior, Chittorgarh, Jhalawar, Bhilwara areas have major influence on project traffic.

Concession period and revenue sharing arrangement

The NHAI granted IRB KTPL a concession for a period of 20 years for this project. The concession period for the project shall commence from the appointed dated under the concession agreement.

The concession agreement provides that if the average of the actual toll revenue collected by IRB KTPL over certain specified time periods ("**Target Points**") falls short of or exceeds the target revenue for such periods (being ₹91.10 million in the month of March 2031 and ₹168.10 million in the month of March 2028, respectively) by more than 20% or 30%, then for every 1% shortfall or increase as compared to the target revenue, the concession period shall be increased by 1.5% or decreased by 0.75% thereof, subject to the limits specified in the concession agreement. The concession agreement also states that in the event that the NHAI requires IRB KTPL to undertake capacity augmentation, there will be no modification in the Target Points under the concession agreement.

In consideration of the grant of concession, IRB KTPL shall pay to the NHAI in accordance with terms of the concession agreement and prior to the appointed date, a lumpsum upfront concession fee of an amount equivalent to ₹5.22 billion.

Monthly toll revenue

As of the date of this Letter of Offer, IRB KTPL has not received the appointed date for the IRB KTPL Project. Accordingly, the toll revenue of IRB KTPL is nil.

Land

The NHAI owns the land that underlies the IRB KTPL Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 102.

Operation and Maintenance Services

Our key business activity is the development, operation and maintenance of the Portfolio pursuant to, and in accordance with, the provisions of the concession and other road project related agreements (as applicable). The Project SPVs are required to operate and maintain their respective assets in accordance with the relevant concession agreement, including by modifying, repairing or otherwise making improvements to the road. In particular, each of the concession agreements requires the Project SPVs to maintain their respective assets to certain standards during the concession period. The concessioning authorities have used, and will likely continue to use, independent engineers to carry out periodic tests to assess the quality of the roads or bridges and their related maintenance.

The Project Manager manages the critical day-to-day operation and maintenance of the Portfolio. The Project Manager, through the relevant Project Implementation Agreement, provides project and contract management support, such as liaising with and supervising sub-contractors, managing design and planning and obtaining necessary licenses and approvals for the projects.

A Project SPV is generally responsible for carrying out operation and maintenance activities at its toll road during its concession period. The scope of a Project SPV's operation and maintenance activities is usually defined in the relevant concession agreement. Within the scope of such operation and maintenance obligations, the Project SPV may be required to undertake routine and periodic maintenance of project roads, maintain and comply with safety standards to ensure smooth and safe traffic movement, deploy adequate human resources for incident management, maintain proper medical and sanitary arrangements for personnel deployed at the site, prevent any unauthorized entry to and exit from the project as may be required. The activities of the Project SPVs are undertaken by the Project Manager pursuant to the Project Implementation Agreements.

A computerised maintenance management system is used to ensure that all maintenance is systematically and correctly scheduled, carried out and recorded. In addition, it is used to assure planning, control and monitoring of each maintenance activity. Maintenance methodologies and system performance are regularly reviewed and examined for optimisation of resource deployment.

Operations

Toll collection system

Toll is collected for each journey through each of the toll plazas. Signs setting out the toll rates are displayed at the toll booths and tolls can be paid or tendered by the driver of any vehicle in the following manner:

Cash

Tolls paid by means of cash are collected by toll collectors at the manual toll booths.

Electronic toll collection

The Project SPVs make use of technology for the operation of the projects which helps in improving operational efficiency and ensuring transparency in the process of toll collection, including through electronic toll collection system based on radio-frequency identification technology, which was implemented in the projects. Further, the Project SPVs use weight based tolling systems with the help of devices that are designed to capture and record axle weights and gross vehicle weights as vehicles drive over a measurement device fitted in each lane.

Monitoring

Toll collection

Payments at the toll plazas, both electronic as well as cash payments are processed through a semi-automated or a fully-automated toll collection system, depending on complexity of the project. Both these systems collect and store traffic and payment data, thereby reducing the need for manual operation. A semi-automated system consists of revenue collection software desktop, barrier gate, smart cards and monitoring cameras and a fully automated system includes equipment such as vehicle counting classifier, vehicle audit system, communication channels and traffic control equipment in addition to all the components of a semi-automated system.

For the purpose of identifying categories of vehicles and to charge an appropriate toll rate, the automatic vehicle identification based in-road/infrared sensors are also used. The Project SPVs also use/will use weigh-in-motion technology for projects where weight based toll collection is mandated. The weight based tolling systems are integrated with the fully automatic toll collection system for enhanced revenue controls.

There are cameras installed particularly for capturing and recording any toll evasion incidents by vehicles. There is also a back-up power supply system to ensure that there is no interruption to power supply at the toll plazas in order to maintain a stable power supply for the sub-systems and equipment. Servers used in the toll collection systems at the toll plazas are capable of real time uploading of transaction data from toll lane equipment and performing an automatic daily backup to prevent any toll data loss and to enable quick system recovery, which allows the Project SPVs to collect variable amounts of tolls depending on the class of motor vehicles and serves as a traffic information system.

Only certain authorized persons have access to the toll collection systems and the activities are recorded for security purposes. The Project Manager is responsible for operating the toll collection system at the toll plazas of the Project SPVs and taking regular preventive and corrective measures to maintain such systems at the highest levels of security and reliability.

We have set up a centralized control room ("**Control Room**") at our office in Mumbai that consolidates cameras at the toll plazas to enable video based monitoring of the toll operations throughout the day.

Traffic control

There is an emergency telephone system to provide a reliable communication channel for the drivers in cases of emergency where they need to communicate with staff at the Control Room. Emergency telephone systems and emergency helpline numbers are provided at all projects where such systems and numbers are required by the relevant concession agreement. There are also patrol vehicles that patrol an assigned section of the relevant project for regulating traffic and undertaking surveillance activities.

Safety Measures

Under the terms of the concession agreements, concessionaires are required to ensure certain safety requirements, which include measures such as road signs, pavement marking, traffic control devices, roadside furniture, highway design elements, enforcement and emergency response. The concessionaires are bound by, *inter-alia*, applicable law and applicable permits, the Manual for Safety in Road Design as issued by MoRTH, relevant standards and guidelines of the Indian Roads Congress and good industry practice. The concessionaires also carry out safety audits of the projects from time to time, by appointing a safety consultant, which is comprised of, among others, one road safety expert and one traffic planner. These safety requirements apply to all phases of construction, operation and maintenance with emphasis on identification of factors associated with accidents and implementation of appropriate remedial measures.

Management

We are managed by qualified personnel of the Investment Manager, all of whom have management and operational experience in the roads and highways sector. The board of directors of the Investment Manager has also constituted committees required under the InvIT Regulations.

The Investment Manager, in consultation with the Trustee, has appointed the directors on the board of each Project SPV in accordance with the InvIT Regulations. Each Project SPV's board of directors has also formed committees as may be required under the Companies Act, 2013 and rules made thereunder.

For further details about the Investment Manager, see "*The Investment Manager*" on page 317.

Various financing agreements that the Project SPVs have entered into with certain banks and financial institutions contain certain restrictive covenants, including, but not limited to, requirements that they obtain consent from the lenders prior to changing the composition of any board of directors of any Project SPV. For more details, see "*Risk Factors – The Project SPVs are subject to restrictive covenants under their financing agreements that could limit our flexibility in managing our business or to use cash or other assets*" on page 34.

Seasonality

Traffic volume tends to decrease during the monsoon season and conversely tends to increase during holiday seasons. While the northern parts of India experience monsoon rains during the period from June or July until September or October every year, the southern parts of India, especially Tamil Nadu and some parts of coastal Andhra Pradesh, experience monsoon rains even during the months of October to December. The monsoon season may also restrict the ability to carry on activities related to operation and maintenance of toll roads. For further details on risk associated with seasonality, see "*Risk Factors – Our business will be subject to seasonal fluctuations that may affect our cash flows*" on page 28. Conversely, traffic volume tends to increase during holiday seasons.

Health, Safety and Environment

The Investment Manager and Project Manager believe that the Trust and the Project SPVs are in compliance, in all material respects, with applicable health, safety and environmental regulations and other requirements in their operations. The Project Manager believes that accidents and occupational health hazards can be significantly reduced through a systematic analysis and control of risks and by providing appropriate training to management, employees and sub-contractors. Project managers appointed by the Project SPVs, as applicable, for a project are principally responsible for ensuring that safety standards are met at the relevant project sites.

Intellectual Property

We do not own the "IRB" trademark and "IRB" logo, which are registered in the name of, and owned by, the Sponsor. However, pursuant to a separate name licensing agreement, as amended, the Sponsor has granted to the Trust, each of the Project SPVs and the Investment Manager, the non-transferable and non-assignable right to use the "IRB" trademark as part of their respective corporate names, if applicable, as well as the "IRB" logo in connection with their respective businesses, on a non-exclusive basis. The license may be terminated under certain circumstances, including (i) if the Sponsor or any of its subsidiaries ceases to be the sponsor of the Trust for any reason whatsoever; or (ii) if the Sponsor or any of its subsidiaries ceases to hold at least 51% of the equity share capital of the Investment Manager, or an entity which is not a subsidiary of the Sponsor is appointed as the investment manager of the Trust. Upon the termination of the license, the Trust or the relevant Project SPV, as the case may be, will be required to cease the use of the IRB trademark and change its name to remove IRB from its name within three months from the date of termination, which may have a material adverse effect on the operations of the Project SPVs and require management's time and attention. Pursuant to an amendment agreement, which will be effective (i) from the date of closing under the IRB LTPL Share Subscription Agreement for IRB LTPL; (ii) from the date of closing under the IRB KTPL Share Subscription Agreement for IRB KTPL; and (iii) from the date of closing under the IRB GTPL Share Subscription Agreement for IRB GTPL, IRB LTPL, IRB GTPL and IRB KTPL have been made parties to the Name Licensing Agreement.

See also "*Risk Factors – We do not own the 'IRB' trademark and logo. Our license to use the 'IRB' trademark and logo may be terminated under certain circumstances and our ability to use the trademark and logo may be impaired*" on page 32.

Property

The Investment Manager's registered office is located in Mumbai from which all its administrative and reporting activities are conducted. The principal place of business of the Trust is located in Mumbai. The Investment Manager and the Trust also have an office located in New Delhi. The Project SPVs typically lease various premises across India to facilitate their work at their project sites. These leases usually expire upon completion of the relevant project.

Insurance

The Project SPVs' operations are subject to hazards inherent in providing operation and maintenance services, such as risk of equipment failure, work accidents, fire, earthquake, flood and other force majeure events. This includes hazards that may cause injury and loss of life, damage and destruction of property, equipment and environmental damage. The principal types of insurance coverage for the Portfolio include standard fire and special perils insurance, contractor all-risk insurance and money insurance. The Investment Manager also maintains management liability insurance. The Investment Manager and the Trustee confirm that the amount of insurance that we presently maintain represents an adequate and appropriate level of coverage required to insure the Project SPVs' business and operations and all the infrastructure assets held by the Project SPVs, and is in accordance with the concession agreements and industry standards in India and will perform regular assessment on the adequacy of its insurance coverage on a yearly basis.

Legal Proceedings

The Project SPVs, the Sponsor, the Investment Manager, the Project Manager and the Trustee are or may be involved in legal proceedings or claims from time to time. Certain proceedings or claims are currently pending at different levels of adjudication before various courts, tribunals and regulatory authorities. For a description of the material legal proceedings that are outstanding, see "*Material Litigation and Regulatory Action*" on page 695.

CORPORATE GOVERNANCE

Set out below is a summary of the corporate governance framework which is applicable in relation to the Trust, the Investment Manager and the Project SPVs.

Composition of the Board of Directors of the Investment Manager

As at the date of this Letter of Offer, the Sponsor holds 51% of the equity share capital of the Investment Manager and Croxley Investment Pte. Ltd. ("**Croxley**") holds 49% of the equity share capital of the Investment Manager. For details of the current board of directors of the Investment Manager (the "**Board**"), see "*The Investment Manager*" on page 317.

The Sponsor, Croxley and the Investment Manager have entered into a shareholders agreement dated August 6, 2019, as amended (the "**IM SHA").** For details of the rights in relation to shareholding and certain other rights of Croxley in the Investment Manager, see "*The Investment Manager"* on page 317. The Cintra IM Investor has entered into an amendment agreement to the IM SHA with the other parties to the IM SHA, which will be effective upon the completion of the Cintra Transaction. Closing of the Cintra Transaction is subject to the receipt of requisite regulatory approvals.

Upon the completion of the Cintra Transaction, the Sponsor will continue to hold 51% of the equity share capital of the Investment Manager, Croxley will hold 25% of the equity share capital of the Investment Manager and the Cintra IM Investor will hold 24% of the equity share capital of the Investment Manager.

The Board shall consist of eight directors in accordance with the terms of the IM SHA. The current composition of the Board is as follows:

(a) the Sponsor is entitled to nominate two directors on the Board (the "**Sponsor Directors**");

(b) Croxley is entitled to nominate two directors on the Board (the "**Investor Directors**"); and

(c) four independent directors are to be appointed in accordance with the InvIT Regulations, of which: (i) the Sponsor is entitled to recommend for appointment of two independent directors; (ii) Croxley is entitled to recommend the appointment of two independent directors; and (ii) at least one of the independent directors shall be a woman director.

Upon the completion of the Cintra Transaction, Croxley will be entitled to nominate one director on the Board, the Cintra IM Investor will be entitled to nominate one director on the Board and each of Croxley and the Cintra IM Investor will be entitled to recommend for the appointment of one independent director.

Under the IM SHA, an alternate director may be appointed to act as an alternate to the Sponsor Directors or Investor Directors during such director's absence for a period of at least three months from India, in accordance with the Companies Act.

The Investment Manager will reimburse the Board for all actual travel and accommodation expenses incurred by them or their alternate directors in connection with the performance of their duties as directors of the Investment Manager in accordance with the IM SHA. The directors will be entitled to sitting fees or any other remuneration for attending meetings as mutually agreed in writing by the parties.

In addition to the right to nominate directors on the Board, the Sponsor and Croxley are entitled to appoint one observer on the Board and/or the committees of the Board.

Chairperson

The chairperson of the Board will be the Sponsor Director unless an Event of Default has occurred.

Quorum

Subject to the provisions of the InvIT Regulations, the quorum for every meeting of the Board shall be one-third of its total strength or three directors, whichever is higher, including at least one independent director (including any meetings held by video-conferencing or by other audio-visual means).

If quorum is not present within 30 (thirty) minutes of the scheduled time for any meeting of the Board or ceases to exist at any time during such meeting, the meeting of the Board will be automatically adjourned and be reconvened on the same day in the following week, time and place and if such day is not a Business Day, then the immediately following Business Day. At any such adjourned meeting, the presence of at three directors shall be required to constitute the quorum; provided that no reserved matters will be taken up for discussion or voted upon at any board meeting (including any adjourned board meeting) unless at least one Investor Director and at least one IRB Director are present in such meeting, or if prior written consent in respect of such reserved matters has been obtained in accordance with the IM SHA. No matters which were not part of the agenda for the original board meeting will be discussed at such adjourned meeting. Subject to the terms of the IM SHA, the Investor Directors and the Sponsor Directors may at any time waive their respective right to form part of the quorum for a particular board meeting, in writing, and at any such board meeting, no new matters other than those forming part of the agenda for such board meeting will be discussed or taken up.

Frequency of meetings

Subject to the provisions of the InvIT Regulations, the Board will meet at least four times a year and once every 120 days, at any location mutually agreed between the Sponsor Directors and the Investor Directors.

Committees

The Investment Manager has constituted (i) an audit committee; (ii) a capex monitoring committee; (iii) a health and safety monitoring committee; (iv) nomination and remuneration committee; (v) stakeholders relationship committee; (vi) risk management committee; and (vii) a prevention of sexual harassment committee, in accordance with the terms of the InvIT Regulations (as applicable).

The Sponsor and Croxley have the right to nominate a Sponsor Director and an Investor Director, respectively, as a member of any committee or sub-committee of the board. In addition to the committees of the Board set out above, the Board may constitute committees for various functions from time to time.

Reserved Matters

In accordance with the terms of the IM SHA, the Sponsor and Croxley have agreed that no resolution will be passed or decision or action be taken by the Investment Manager in relation to any Manager Group Member, in any manner, including by the Board, the shareholders or otherwise in respect of any of the Reserved Matters, unless the written consents of an Investor Director and a Sponsor Director have been obtained in the manner specified in the IM SHA, prior to any decisions on Reserved Matters being taken in any other manner. Subject to applicable law, the Sponsor, Croxley, each of the Sponsor Directors and/or each of the Investor Directors will have the right to require that any Reserved Matter be decided at a shareholder meeting instead of at a Board meeting and/or with the prior written consent of Croxley or of the Sponsor in accordance with the terms of the IM SHA.

Under the IM SHA, any obligation on any Manager Group Member is deemed to be a simultaneous and corresponding obligation on the Sponsor to exercise its voting rights in relation to the Investment Manager to perform such obligation.

Upon the completion of the Cintra Transaction, the written consent of equity shareholders holding a certain agreed percentage of the equity shareholding will be required, depending on whether the relevant matter is an Ordinary Reserved Matter (as specified in the IM SHA) or a Special Reserved Matter (as specified in the IM SHA).

For details of the Reserved Matters, see "*Rights of Unitholders – Approval of Unitholders*" on page 308.

Directors of the SPVs

The Investment Manager, in consultation with the Trustee, has appointed the directors on the board of each Project SPV in accordance with the InvIT Regulations. Further, pursuant to the terms of the IM SHA, each of the Sponsor and the Croxley have the right to require a director or observer on the board of directors of any SPV as a representative of the Investment Manager.

Fall-Away

The rights of the Sponsor and Croxley in relation to the board of directors of the Investment Manager, shareholders meetings and voting and reserved matters under the IM SHA will terminate with respect to such party upon such party's (together its affiliates') shareholding in the Investment Manager (calculated on a fully diluted basis) falling below 20% of the share capital of the Investment Manager.

All rights of the Sponsor or Croxley under the IM SHA other than the economic and voting rights attached to the securities held by them shall terminate with respect to such party upon such party's (together with its affiliates') shareholding in the Investment Manager (calculated on a fully diluted basis) falling below 10% of the share capital of the Investment Manager.

The Sponsor, Croxley and the Cintra IM Investor have agreed to a lower threshold for the fall-away of rights under the IM SHA, which will be effective upon the completion of the Cintra Transaction.

Policies of the Manager Group

Pursuant to the terms of the IMA SHA, the Investment Manager (on behalf of itself and the Trust), each of the Project SPVs are required to adopt certain policies for corporate governance, key terms of which are set out below. Each Manager Group Member is required to ensure that these policies remain in full force and effect and consider amendments in accordance with the terms of the Framework Agreement. Mr. Kaustubh Shevade has been designated by the Investment Manager as the Compliance Officer with respect to the Trust.

Code of Conduct

The Code of Conduct serves as a basis for maintaining the standards of honest and ethical business conduct including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships, ensuring confidentiality of corporate information and data of the Manager Group, the Sponsor/Project Manager, and the Trustee (together the "**Trust Entities**") and compliance with the applicable laws and the InvIT Regulations. The key terms of the Code of Conduct include *inter-alia*:

(i) Duties must be carried out in an honest, fair, diligent and ethical manner within the scope of the authority conferred and in accordance with applicable laws, rules, regulations, agreements, guidelines, standards, and internal policies and procedures.

(ii) Assets, properties, and human resources of the Manager Group Members are to be used only for the official business of the Trust Entities, and the security of all confidential information must be ensured.

(iii) The Trust Entities must not, and ensure that their employees do not engage in any business activity that conflicts with the interest of a Manager Group Member.

(iv) The Trust and the parties to the Trust must conduct all affairs in the interest of the unitholders of the InvIT, and they shall make adequate, accurate, explicit and timely disclosure of relevant material information to all unit holders, exchanges and the Securities and Exchange Board of India in accordance with the InvIT Regulations.

(v) The Trust, the parties to the Trust and any third party appointed by the Investment Manager shall not use any unethical means to sell, market or induce any person to buy units of the Trust and where a third party appointed by the Investment Manager fails to comply with this condition, the Investment Manager shall be held liable for the same. The Trust and the parties to the Trust shall render at all times high standards of service, exercise due diligence, ensure proper care and exercise independent professional judgment.

Disclosure of Information Policy

This policy sets out the process and procedure for determining materiality of information in relation to periodic disclosures required under applicable law, including the InvIT Regulations. The key terms of the Disclosure of Information Policy include *inter-alia*:

(i) The following information in relation to the Manager Group shall be provided to the Unitholders:

a. quarterly management accounts within 20 days from the end of each calendar month;
b. unaudited quarterly financial statements (including profit and loss accounts and a balance sheet) and management accounts for each financial quarter within 45 days from the end of such financial quarter;
c. audited annual financial statements (including profit and loss accounts and a balance sheet) for every Financial Year within 60 days of the end of such Financial Year;
d. notices, agenda and minutes of meetings of board of directors, committees of the board and shareholders of the Manager Group Member as may be requested by the unitholders;
e. copies of all agreements, business projections, reports, certificates and any material information regularly provided to any other security holder or lender (in their capacity as security holders or lenders), including any management or audit or investigative reports provided to any security holder or lender, simultaneously with such security holder or lender;
f. proposed Annual Budget for the upcoming Financial Year by March 15 of the preceding Financial Year;
g. toll collection MIS data and lenders' independent engineers' reports for each SPV on monthly basis;
h. prior intimation, to the extent practicable, regarding initiation of any criminal litigation to which the Manager Group Member is a party; and
i. prior intimation regarding initiation of any civil or administrative litigation, arbitration or other legal proceedings to which the Manager Group Member is a party and which relate to a claim amount exceeding INR 25 million.

(ii) Disclosure of information to regulators:
a. The Manager Group Member shall submit the information required to be submitted to the SEBI, the NHAI, MoRTH, the RBI, the Stock Exchanges or any other governmental, regulatory, statutory, administrative, or judicial body under applicable law, including or such further information or clarification required by any of them; and
b. The Manager Group Member shall inform the SEBI, in writing, if any information or particulars previously submitted to SEBI are found to be false or misleading in any material particular or if there is any material change in the information already submitted, in accordance with InvIT Regulations.

Distribution Policy

For details of the Distribution Policy, see "*Distributions*" on page 303.

Procurement and Divestment Policy

This policy sets out the guidelines for procurement and divestment of the Trust Assets and the assets of any Manager Group Member (collectively, the "**Manager Group Assets**"). The key terms of the Procurement and Divestment Policy include, *inter-alia*:

(i) The Investment Manager is empowered to make all investment decisions with respect to the underlying assets or projects of the Trust, including, without limitation, investigation, selection, development, negotiation, structuring, restructuring, commitment to or monitoring and any further investment or divestment of the underlying assets or projects of the Trust.

(ii) The Investment Manager shall focus on addition of new assets to the existing portfolio of the Manager Group Assets. The projects acquired shall be in the under-construction phase in order to utilize and leverage the experience and technical expertise of the Manager Group Members.

(iii) Any decision for procurement and divestment of the Manager Group Assets must be made in accordance with the Annual Budget, the Business Plan and the terms of the Framework Agreement and the IM SHA. Any procurement or divestment that is not in accordance with such documents will require the written consent of the shareholders of the Investment Manager and the Unitholders of the Trust. It is clarified that this shall be treated as a matter which is not in the ordinary course of business and will require the approval of the unitholders under Regulation 22(5)(d) of the InvIT Regulations.

Upon the completion of the Cintra Transaction, a fresh investment and procurement policy will be adopted, in supersession of the current Procurement and Divestment Policy.

Leverage Policy

For details of the Leverage Policy, see "*Leverage*" on page 284.

Nomination and Remuneration Policy

This policy sets out the guidelines regarding the nomination, remuneration and removal of directors, key managerial personnel and employees of the Manager Group. The key terms of the Nomination and Remuneration Policy include, *inter-alia*:

(i) The board of directors of the Manager Group Members shall, as applicable, have the required number of independent directors in terms of the applicable law, including the Companies Act.

(ii) The board of directors of each of the Manager Group Members, is, as applicable, expected to possess the required expertise, skill and experience to effectively manage and direct the Manager Group Members to attain its organizational and business goals. They are expected to be persons with vision, leadership qualities, and proven competence and integrity.

(iii) Each member of the board of directors of the Manager Group Members, as applicable, shall ensure that their personal interest does not run in conflict with the any of the Manager Group Member's interests.

(iv) The annual performance and remuneration review of the employees of the Manager Group Members shall be done once every year. The review of remuneration will be undertaken on the basis of the following criteria:
   a. Performance of the employee;
   b. Performance of the team to which such employee belongs;
   c. Overall performance of the Manager Group Member; and
   d. Prevailing business environment and requirement of manpower for future projects.

Additionally, the following terms will be applicable to the Investment Manager:

a. The board of directors shall constitute a capex monitoring committee, a health and safety monitoring committee, an audit committee and all such other committees of the board of directors as are required to be constituted by the Investment Manager under applicable law.
b. The board of directors shall appoint and designate such key managerial personnel as are required under applicable law, including a Chief Executive Officer, a Chief Financial Officer and a Company Secretary of the Investment Manager. These key managerial persons shall be jointly nominated by the Sponsor and Croxley, and appointed by the board of directors.

Record Retention Policy

The policy sets out the guidelines for the identification of documents and records which are required to be preserved, storage, maintenance and preservation of documents and records of the Manager Group and protection and preservation of all the necessary documents and records as per the statutory requirements. The key terms of the Record Retention Policy include, *inter-alia*:

(i) The policy applies to all the documents required to be maintained in terms of the InvIT Regulations, the applicable secretarial standards, and any other applicable law which shall be preserved under the custody of the compliance officer of the respective Manager Group Members. It also applies to all financial records required to be maintained in terms of the InvIT Regulations, the prescribed accounting standards, the Income Tax Act, 1961, and any other applicable law which shall be maintained under the custody of the chief financial officer of the respective Manager Group Member.

(ii) All documents which are required to be preserved by virtue of applicable laws shall be preserved either permanently or for such periods as may be mandated by applicable laws from time to time.

(iii) Documents which are required to be preserved for a period of not less than eight years after the completion of the relevant transaction shall be determined by the relevant heads of departments of the Manager Group Member from time to time.

(iv) Documents shall be preserved in a chronological manner for each financial year.

(v) The Manager Group Members shall maintain back-up of all documents maintained in electronic form. Documents which are confidential in nature shall, wherever possible, be kept under lock and key and shall be shared on a 'need to know' basis only, with persons directly involved in the transaction involving such documents and records.

(vi) Certain documents may be required to be kept open by the Manager Group Member for inspection in the manner specified under such applicable law. Regulatory authorities, including the SEBI, have the right of access to all registers and records.

(vii) Documents which are statutorily required to be hosted on the website of any Manager Group Member shall be hosted within the prescribed timeline from the occurrence of the event.

(viii) Where documents are no longer required to be preserved, or on the expiration of the specified period of time for which they were required to be preserved, they may be discarded or disposed off in accordance with the procedure specified under the applicable law, and where no procedure has been specified, they may be discarded or disposed off in accordance with the standard operating procedures applicable to the respective departments.

In addition, the Investment Manager (on behalf of itself and the Trust) and each of the Project SPVs have also adopted policies on corporate social responsibility, environment, health and safety, maternity benefits, equal opportunities, procurement, prohibited practices and anti-trust practices, anti-corruption practices, prevention of sexual harassment and anti-harassment, personal data protection, whistle-blowing / vigil mechanism, corporate disclosures, internal procedure and insider trading, conflict of interest policy, appointment of directors, cyber matters, environmental, social and corporate governance commitments, grievance redressal, human rights, internal control, compensation in case of accident, risk management, secretarial compliance and succession policy.

SUMMARY OF THE CONCESSION AGREEMENTS

Set out below are summaries of the concession agreements entered into by the Project SPVs in relation to their respective business. The descriptions and summaries of the agreements below are not and nor do they purport to be complete descriptions or summaries of all terms of such agreements. Certain terms used in this section have the meanings assigned to such terms in the respective concession agreements. Copies of these concession agreements will be made available for inspection at the office of the Trust in New Delhi. *See "Material Contracts and Documents for Inspection" on page 732.*

1. Concession Agreement between AETL and the NHAI dated September 1, 2015

AETL has entered into a concession agreement for six-laning of km 199.660 to km 323.525, Agra to Etawah Bypass section of NH-2 in Uttar Pradesh on build, operate and transfer ("**BOT**") basis (the "**AETL Concession Agreement**"), for a period of 24 years, from August 1, 2016 ("**AETL Appointed Date**") or until such date on which the AETL Concession Agreement is terminated by a termination notice ("**AETL Termination Date**", and the period between the AETL Appointed Date and the AETL Termination Date, the "**AETL Concession Period**").

Certain Definitions

"**AETL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principal**") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the AETL Debt Due is convertible into equity at the option of the senior lenders and/or AETL, it shall, for the purposes of the AETL Concession Agreement, be deemed to be AETL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**AETL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**AETL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of AETL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the AETL Project Highway (as defined below), but does not include additional facilities;

"**AETL Project Highway**" shall mean the site comprising the existing road comprising section of six-laning of Agra-Etawah Bypass section of NH-2 from km 199.660 to km 323.525 in the State of Uttar Pradesh under NHDP Phase-V on BOT(Toll) mode and all AETL Project Assets, and its subsequent development and augmentation in accordance with the AETL Concession Agreement;

"**AETL Project**" shall mean the construction, operation, and maintenance of the AETL Project Highway in accordance with the provisions of the AETL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Premium**" shall mean an amount paid to the NHAI by AETL in the form of an additional concession fee, as set forth in the bid for each year of the AETL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the AETL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to AETL, and AETL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the AETL Concession Agreement, to construct, operate and maintain the AETL Project for a period of 24 years from the AETL Appointed Date.

Subject to, and in accordance with the provisions of the AETL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, AETL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the AETL Concession Agreement;

b) finance and construct the AETL Project Highway;

c) manage, operate, and maintain the AETL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the AETL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of AETL's obligations under and in accordance with the AETL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of AETL under the AETL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the AETL Concession Agreement, or the concession granted, or on the whole or any part of the AETL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the AETL Concession Agreement or the agreement for the substitution of AETL entered into by AETL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, AETL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the AETL Concession Agreement and the applicable rules and regulations, provided that for ease of payment, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, AETL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the AETL Concession Agreement, AETL shall not collect any fees in relation to exempted vehicles.

AETL shall not collect any fee from a local user for non-commercial use of the AETL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the AETL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, AETL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, AETL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the AETL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, AETL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, AETL was required to pay to the NHAI on the AETL Appointed Date, a Premium in the form of an additional concession fee equal to ₹810 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year of the AETL Concession Period, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 5% as compared to the immediately preceding year. The Premium is deemed to be a part of the concession fee.

The concession fee payable under the provisions of the AETL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

AETL was required to, prior to the AETL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the AETL Concession Agreement read with the escrow agreement entered into amongst AETL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

AETL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the AETL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

AETL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by AETL for and in respect of the AETL Project Highway;

b) all payments relating to construction of the AETL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the AETL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;
f) monthly proportionate provision of AETL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by AETL, including repayment of revenue shortfall loan;

i) monthly proportionate provision of AETL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of AETL.

AETL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the AETL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by AETL for and in respect of the AETL Project Highway;

b) 90% of the AETL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by AETL, including the Premium and the repayment of the revenue shortfall loan;

e) retention and payments relating to the liability for defects and deficiencies set forth in the AETL Concession Agreement;

f) outstanding AETL Debt Service including balance of AETL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the AETL Concession Agreement; and

j) balance, if any, in accordance with the instructions of AETL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the AETL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the AETL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the AETL Concession Agreement and the costs thereof shall be expended by AETL and reimbursed by the NHAI.

If AETL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 15 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the AETL Concession Agreement, or inform AETL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of AETL being in material default or breach of the AETL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the AETL Concession Agreement.

In the event of the NHAI being in material default of the AETL Concession Agreement at any time after the AETL Appointed Date, it shall pay to AETL by way of compensation, all direct costs suffered or incurred by AETL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the AETL Concession Agreement.

In the event that a material default or breach of the AETL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the AETL Concession Period as provided in the AETL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the AETL Concession Agreement, the NHAI shall pay to AETL, for each day of the breach, compensation as provided in the AETL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the AETL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the AETL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the AETL Concession Period shall, subject to payment of concession fee in accordance with the AETL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in AETL Concession Period shall not in any case exceed 20% (twenty percent) of the AETL Concession Period.

Subject to the provisions of the AETL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the AETL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in AETL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in AETL Concession Period under the AETL Concession Agreement, AETL may elect to pay, in addition to the concession fee that would be due and payable if the AETL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by AETL no later than two years prior to the AETL Termination Date contemplated by the AETL Concession Agreement, NHAI shall waive the reduction in AETL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in AETL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the AETL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the AETL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The AETL Concession Period, may be extended so that it yields for AETL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the AETL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to AETL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by AETL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this AETL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the AETL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the AETL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the AETL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and AETL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, AETL shall be deemed to be in default of the AETL Concession Agreement ("**AETL Default**"), unless the default has occurred solely as a result of any breach of the AETL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the AETL Concession Agreement and AETL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the AETL Concession Agreement, AETL fails to cure, within a cure period of 90 days, the AETL Default for which whole or part of the performance security was appropriated;

c) AETL does not achieve the latest outstanding project milestone due in accordance with the AETL Concession Agreement and continues to be in default for 90 days;

d) AETL abandons or manifests intention to abandon the construction or operation of the AETL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the AETL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the AETL Concession Agreement;

g) AETL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) AETL has failed to make any payment to the NHAI within the period specified in the AETL Concession Agreement;

i) an escrow default has occurred and AETL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and AETL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by AETL has caused a material adverse effect;

l) AETL creates an encumbrance in breach of the AETL Concession Agreement;

m) AETL repudiates the AETL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the AETL Concession Agreement;

n) a change in ownership has occurred in breach of the AETL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of AETL under any of the project agreements, or of (ii) all or part of the assets or undertaking of AETL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of AETL has caused a material adverse effect;

q) AETL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for AETL or for the whole or material part of its assets that has a material bearing on the AETL Project;

r) AETL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of AETL is passed, or any petition for winding up of AETL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or AETL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of AETL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of AETL under the AETL Concession Agreement and the project agreements; provided that:

    i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the AETL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the AETL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of AETL as at the AETL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of AETL which is, as of the date hereof, found to be materially false, incorrect or misleading or AETL is at any time hereafter found to be in breach thereof;

u) AETL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) AETL has failed to fulfil any obligation, for which failure termination has been specified in the AETL Concession Agreement; or

w) AETL commits a default in complying with any other provision of the AETL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the AETL Concession Agreement, upon the occurrence of an AETL Default, the NHAI shall be entitled to terminate the AETL Concession Agreement by issuing a termination notice to AETL. Before issuing the termination notice, the NHAI shall, by notice, inform AETL of its intention to issue a termination notice and grant 15 days to AETL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the AETL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 15 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute AETL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of AETL. On a written request from the lenders' representative and AETL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by AETL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the AETL Concession Agreement, the NHAI shall be deemed to be in default of the AETL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the AETL Concession Agreement by AETL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the AETL Concession Agreement and such default has a material adverse effect on AETL;

b) the NHAI has failed to make any payment to AETL within the period specified in the AETL Concession Agreement;

c) the NHAI repudiates the AETL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the AETL Concession Agreement; or

d) the State of Uttar Pradesh commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on AETL and the breach continues for a period of 90 days from the date of notice given in this behalf by AETL to the NHAI.

Without prejudice to any other rights or remedies which AETL may have under the AETL Concession Agreement, upon the occurrence of an NHAI Default, AETL shall be entitled to terminate the AETL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, AETL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of an AETL Default during the operation period, the NHAI shall pay to AETL, by way of termination payment, an amount equal to 90% of the AETL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of AETL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to AETL, by way of termination payment, an amount equal to:

a) AETL Debt Due; and
b) 150% of the adjusted equity.

Termination payment shall become due and payable to AETL within 15 days of a demand being made by AETL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the AETL Concession Agreement shall constitute a full and final settlement of all claims of AETL on account of termination of the AETL Concession Agreement for any reason whatsoever and AETL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

AETL shall be responsible for all defects and deficiencies in the AETL Project Highway for a period of 120 days after termination. AETL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the AETL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the AETL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

1.1. Supplementary Agreement between AETL and the NHAI dated April 7, 2018

AETL has entered into a supplementary agreement (the "**Supplementary Agreement**") to amend the concession agreement dated September 1, 2015 (the "**Concession Agreement**") to provide for the installation of a new electronic toll collection system (the "**Hybrid ETC System**") for electronic payment of user fee using RFID tags or any other such device.

Change of Scope

The NHAI shall provide a change in the scope of work order at prices discovered by the NHAI to AETL to provide for, as per the defined technical specifications, installation, testing, commissioning, operations and maintenance of the Hybrid ETC System in all lanes of the toll plaza. AETL shall ensure that the requisite civil work is completed prior to the installation, integration, testing and commissioning of the Hybrid ETC System. It shall also ensure the smooth flow of traffic during installation, integration, testing and commissioning of the Hybrid ETC System. AETL will have no claim against the NHAI on account of any lane closure, if any, on account of any third party claims.

Scope of Work

AETL shall install, integrate, test, commission, operate and maintain the Hybrid ETC System in all the lanes of the toll plazas. The Hybrid ETC System shall be installed, commissioned, operated and maintained for a period of five years or the end of the Concession Agreement, whichever is earlier, beyond which it will be replaced or renewed, as the case may be, by AETL or the NHAI, at the cost of the NHAI. The cycle shall be maintained till the end of the concession period in accordance with the Concession Agreement.

The provisions of the Concession Agreement relating to change of scope shall not apply to the Supplementary Agreement.

Any permission required by AETL under the applicable laws for the installation of the Hybrid ETC System shall be procured and maintained by AETL. The NHAI shall provide reasonable assistance in this regard.

Timeline

AETL shall complete all responsibilities, obligations and works as described in the Supplementary Agreement within a period of 120 days from the date of issuance of the change of scope work order by the NHAI and the release of advance payment.

Damages for Delay

In case of delay in installation, testing, or commissioning of the Hybrid ETC System at the toll plazas as per the time schedule prescribed on account of reasons attributable to AETL, damages at 0.1% of the cost of installation, testing, or commissioning of the Hybrid ETC System for each day of the delay, subject to a maximum of 10% of the cost of installation, testing, or commissioning of the Hybrid ETC System shall be levied on AETL. Damages for delay will not be applicable in case of a delay in implementation due to delayed payment release by the NHAI.

AETL shall not be entitled to any additional benefit either in monetary terms or on any other account including, but not limited to any extension of time, save on account of and NHAI Default or force majeure.

Compensation

In case of any damage to the Hybrid ETC System due to any act or omission of AETL, the NHAI shall not be liable for any compensation to AETL, and AETL shall bear the cost of repair, replacement or renewal of the damaged Hybrid ETC System equipment or hardware itself.

In case of any damage to the Hybrid ETC System due to the occurrence of any force majeure event, the compensation to AETL shall be derived as per the provisions of the Concession Agreement.

End of the Concession Period

AETL shall hand over all the Hybrid ETC equipment or hardware in an operational condition to the NHAI or a third party as directed by the NHAI at the end of the concession period, beyond which no O&M payment shall be made to AETL. If any Hybrid ETC System equipment or hardware is found to be non-operational, then AETL shall be liable to replace or pay for the replacement of the Hybrid ETC System equipment or hardware required to make the Hybrid ETC System operational on all lanes of the toll plazas to the NHAI promptly.
Upon termination, AETL shall assign warranties received from the original equipment manufacturer and for the components or equipment, and provide the respective warranty assignment agreements and necessary documents. AETL shall ensure that all the warranties are duly assigned in favor of the NHAI and AETL shall bear the cost and expenses towards the assignment.

1.2. Supplementary Agreement between AETL and the NHAI dated May 1, 2017

AETL has entered into a supplementary agreement with the NHAI to amend the concession agreement dated September 1, 2015 (the "**Concession Agreement**") to provide for dispute resolution through the Society for Affordable Redressal of Disputes ("**SAROD**").

Any dispute arising out of the Concession Agreement which is not resolved amicably shall be finally settled by arbitration. The dispute shall be referred to SAROD for resolution by arbitration in accordance with the rules of SAROD and the Arbitration and Conciliation Act, 1996. AETL and the NHAI shall choose the arbitrators from a panel of arbitrators empanelled by SAROD. The arbitral tribunal shall consist of a sole arbitrator in case the total claim of the dispute is ₹30 million or less, and in case the claim is more than ₹30 million, the tribunal shall consist of an odd number of arbitrators to be nominated by the parties.

The arbitral proceedings shall be held at Delhi (India) and the language of the arbitral proceedings, and that of all the correspondence between the parties shall be English. The dispute shall be governed by the substantive law of India.

2. Concession Agreement between CGTL and the NHAI dated December 9, 2016, as amended

CGTL has entered into a concession agreement for six-laning of Kishangarh Udaipur Ahmedabad section from km 90.000 (near Gulabpura) to km 214.870 (end of Chittorgarh bypass), of NH-79 in Rajasthan on build, operate and transfer ("**BOT**") basis (the "**CGTL Concession Agreement**"), for a period of 20 years, from November 4, 2017 ("**CGTL Appointed Date**") or until such date on which the CGTL Concession Agreement is terminated by a termination notice ("**CGTL Termination Date**", and the period between the CGTL Appointed Date and the CGTL Termination Date, the "**CGTL Concession Period**").

Certain Definitions

"**CGTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principal**") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the CGTL Debt Due is convertible into equity at the option of the senior lenders and/or CGTL, it shall, for the purposes of the CGTL Concession Agreement, be deemed to be CGTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**CGTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**CGTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of CGTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the CGTL Project Highway (as defined below), but does not include additional facilities;

"**CGTL Project Highway**" shall mean the site comprising the existing road comprising NH-79 from km 90.000 to km 214.870 and all CGTL Project Assets, and its subsequent development and augmentation in accordance with the CGTL Concession Agreement;

"**CGTL Project**" shall mean the construction, operation, and maintenance of the CGTL Project Highway in accordance with the provisions of the CGTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Premium**" shall mean an amount paid to the NHAI by CGTL in the form of an additional concession fee, as set forth in the bid for each year of the CGTL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the CGTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to CGTL, and CGTL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the CGTL Concession Agreement, to construct, operate and maintain the CGTL Project for a period of 20 years from the CGTL Appointed Date.

Subject to, and in accordance with the provisions of the CGTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, CGTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the CGTL Concession Agreement;

b) finance and construct the CGTL Project Highway;

c) manage, operate, and maintain the CGTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the CGTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of CGTL's obligations under and in accordance with the CGTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of CGTL under the CGTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the CGTL Concession Agreement, or the concession granted, or on the whole or any part of the CGTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the CGTL Concession Agreement or the agreement for the substitution of CGTL entered into by CGTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, CGTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the CGTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, CGTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the CGTL Concession Agreement, CGTL shall not collect any fees in relation to exempted vehicles.

CGTL shall not collect any fee from a local user for non-commercial use of the CGTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the CGTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, CGTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, CGTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the CGTL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, CGTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, CGTL was required to pay to the NHAI, immediately after the third anniversary year of the COD, a Premium in the form of an additional concession fee equal to ₹2,286,000,000 as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 3% as compared to the immediately preceding year, and for each subsequent year of the CGTL Concession Period, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 8% as compared to the immediately preceding year. The Premium is deemed to be a part of the concession fee.

The concession fee payable under the provisions of the CGTL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

CGTL was required to, prior to the CGTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the CGTL Concession Agreement read with the escrow agreement entered into amongst CGTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

CGTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the CGTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

CGTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by CGTL for and in respect of the CGTL Project Highway;

b) all payments relating to construction of the CGTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the CGTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of CGTL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by CGTL, including repayment of revenue shortfall loan. CGTL has agreed to give irrevocable instructions to the Escrow Bank to make payments from the Escrow Account in accordance with the instructions of the NHAI under the CGTL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of CGTL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of CGTL.

CGTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the CGTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by CGTL for and in respect of the CGTL Project Highway;

b) 90% of the CGTL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by CGTL, including the repayment of the revenue shortfall loan. CGTL has agreed to give irrevocable instruction to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the CGTL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the CGTL Concession Agreement;

f) outstanding CGTL Debt Service including balance of CGTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the CGTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of CGTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the CGTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the CGTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the CGTL Concession Agreement and the costs thereof shall be expended by CGTL and reimbursed by the NHAI.

If CGTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the CGTL Concession Agreement, or inform CGTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of CGTL being in material default or breach of the CGTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the CGTL Concession Agreement.

In the event of the NHAI being in material default of the CGTL Concession Agreement at any time after the CGTL Appointed Date, it shall pay to CGTL by way of compensation, all direct costs suffered or incurred by

CGTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the CGTL Concession Agreement.

In the event that a material default or breach of the CGTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the CGTL Concession Period as provided in the CGTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the CGTL Concession Agreement, the NHAI shall pay to CGTL, for each day of the breach, compensation as provided in the CGTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the CGTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the CGTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the CGTL Concession Period shall, subject to payment of concession fee in accordance with the CGTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in CGTL Concession Period shall not in any case exceed 20% (twenty percent) of the CGTL Concession Period.

Subject to the provisions of the CGTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the CGTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in CGTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in CGTL Concession Period under the CGTL Concession Agreement, CGTL may elect to pay, in addition to the concession fee that would be due and payable if the CGTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by CGTL no later than two years prior to the CGTL Termination Date contemplated by the CGTL Concession Agreement, NHAI shall waive the reduction in CGTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in CGTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the CGTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the CGTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The CGTL Concession Period, may be extended so that it yields for CGTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the CGTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to CGTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by CGTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this CGTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the CGTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the CGTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the CGTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and CGTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, CGTL shall be deemed to be in default of the CGTL Concession Agreement ("**CGTL Default**"), unless the default has occurred solely as a result of any breach of the CGTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the CGTL Concession Agreement and CGTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the CGTL Concession Agreement, CGTL fails to cure, within a cure period of 90 days, the CGTL Default for which whole or part of the performance security was appropriated;

c) CGTL does not achieve the latest outstanding project milestone due in accordance with the CGTL Concession Agreement and continues to be in default for 90 days;

d) CGTL abandons or manifests intention to abandon the construction or operation of the CGTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the CGTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the CGTL Concession Agreement;

g) CGTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) CGTL has failed to make any payment to the NHAI within the period specified in the CGTL Concession Agreement;

i) an escrow default has occurred and CGTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and CGTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by CGTL has caused a material adverse effect;

l) CGTL creates an encumbrance in breach of the CGTL Concession Agreement;

m) CGTL repudiates the CGTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the CGTL Concession Agreement;

n) a change in ownership has occurred in breach of the CGTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of CGTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of CGTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of CGTL has caused a material adverse effect;

q) CGTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for CGTL or for the whole or material part of its assets that has a material bearing on the CGTL Project;

r) CGTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of CGTL is passed, or any petition for winding up of CGTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or CGTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of CGTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of CGTL under the CGTL Concession Agreement and the project agreements; provided that:

i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the CGTL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the CGTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of CGTL as at the CGTL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of CGTL which is, as of the date hereof, found to be materially false, incorrect or misleading or CGTL is at any time hereafter found to be in breach thereof;

u) CGTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) CGTL has failed to fulfil any obligation, for which failure termination has been specified in the CGTL Concession Agreement; or

w) CGTL commits a default in complying with any other provision of the CGTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the CGTL Concession Agreement, upon the occurrence of a CGTL Default, the NHAI shall be entitled to terminate the CGTL Concession Agreement by issuing a termination notice to CGTL. Before issuing the termination notice, the NHAI shall, by notice, inform CGTL of its intention to issue a termination notice and grant 15 days to CGTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the CGTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute CGTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of CGTL. On a written request from the lenders' representative and CGTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by CGTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the CGTL Concession Agreement, the NHAI shall be deemed to be in default of the CGTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the CGTL Concession Agreement by CGTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the CGTL Concession Agreement and such default has a material adverse effect on CGTL;

b) the NHAI has failed to make any payment to CGTL within the period specified in the CGTL Concession Agreement;

c) the NHAI repudiates the CGTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the CGTL Concession Agreement; or

d) the State of Rajasthan commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on CGTL and the breach continues for a period of 90 days from the date of notice given in this behalf by CGTL to the NHAI.

Without prejudice to any other rights or remedies which CGTL may have under the CGTL Concession Agreement, upon the occurrence of an NHAI Default, CGTL shall be entitled to terminate the CGTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, CGTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a CGTL Default during the operation period, the NHAI shall pay to CGTL, by way of termination payment, an amount equal to 90% of the CGTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of CGTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to CGTL, by way of termination payment, an amount equal to:

a) CGTL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to CGTL within 30 days of a demand being made by CGTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the CGTL Concession Agreement shall constitute a full and final settlement of all claims of CGTL on account of termination of the CGTL Concession Agreement for any reason whatsoever and CGTL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

CGTL shall be responsible for all defects and deficiencies in the CGTL Project Highway for a period of 120 days after termination. CGTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the CGTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the CGTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

3. Concession Agreement between IRB HMTL and the NHAI dated May 29, 2018

IRB HMTL has entered into a concession agreement for six-laning of Hapur Bypass to Moradabad section including Hapur Bypass from km 50.000 (design chainage 50.000) to km 148.277 (design chainage 149.867) of NH-24 (new NH-9) in Uttar Pradesh on design, build, finance, operate and transfer ("**DBFOT**") basis (the "**IRB HMTL Concession Agreement**"), for a period of 22 years, from May 28, 2019 ("**IRB HMTL Appointed Date**") or until such date on which the IRB HMTL Concession Agreement is terminated by a termination notice ("**IRB HMTL Termination Date**", and the period between the IRB HMTL Appointed Date and the IRB HMTL Termination Date, the "**IRB HMTL Concession Period**").

Certain Definitions

"**IRB HMTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principal**") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the IRB HMTL Debt Due is convertible into equity at the option of the senior lenders and/or IRB HMTL, it shall, for the purposes of the IRB HMTL Concession Agreement, be deemed to be IRB HMTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**IRB HMTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**IRB HMTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of IRB HMTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the IRB HMTL Project Highway (as defined below), but does not include additional facilities;

"**IRB HMTL Project Highway**" shall mean the site comprising the existing road comprising Hapur Bypass to Moradabad section including Hapur Bypass from km 50.000 (design chainage km 50.000) to km 148.277 (design chainage km 149.867) of NH-24 (new NH-9) and all IRB HMTL Project Assets, and its subsequent development and augmentation in accordance with the IRB HMTL Concession Agreement;

"**IRB HMTL Project**" shall mean the construction, operation, and maintenance of the IRB HMTL Project Highway in accordance with the provisions of the IRB HMTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Premium**" shall mean an amount paid to the NHAI by IRB HMTL in the form of an additional concession fee, as set forth in the bid for each year of the IRB HMTL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the IRB HMTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to IRB HMTL, and IRB HMTL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the IRB HMTL Concession Agreement, to construct, operate and maintain the IRB HMTL Project for a period of 22 years from the IRB HMTL Appointed Date.

Subject to, and in accordance with the provisions of the IRB HMTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, IRB HMTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the IRB HMTL Concession Agreement;

b) finance and construct the IRB HMTL Project Highway;

c) manage, operate, and maintain the IRB HMTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the IRB HMTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of IRB HMTL's obligations under and in accordance with the IRB HMTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of IRB HMTL under the IRB HMTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the IRB HMTL Concession Agreement, or the concession granted, or on the whole or any part of the IRB HMTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the IRB HMTL Concession Agreement or the agreement for the substitution of IRB HMTL entered into by IRB HMTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, IRB HMTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the IRB HMTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, IRB HMTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the IRB HMTL Concession Agreement, IRB HMTL shall not collect any fees in relation to exempted vehicles.

IRB HMTL shall not collect any fee from a local user for non-commercial use of the IRB HMTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the IRB HMTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, IRB HMTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, IRB HMTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the IRB HMTL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, IRB HMTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, IRB HMTL was required to pay to the NHAI, immediately after the third anniversary year of the COD, a Premium in the form of an additional concession fee equal to ₹315 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the IRB HMTL Concession Period, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 8% as compared to the immediately preceding year. The Premium is deemed to be a part of the concession fee.

The concession fee payable under the provisions of the IRB HMTL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

IRB HMTL was required to, prior to the IRB HMTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the IRB HMTL Concession Agreement read with the escrow agreement entered into amongst IRB HMTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

IRB HMTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the IRB HMTL Project Highway, including the proceeds

of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

IRB HMTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, ***inter-alia***, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by IRB HMTL for and in respect of the IRB HMTL Project Highway;

b) all payments relating to construction of the IRB HMTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the IRB HMTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of IRB HMTL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by IRB HMTL, including repayment of revenue shortfall loan. IRB HMTL has agreed to give irrevocable instructions to the Escrow Bank to make payments from the Escrow Account in accordance with the instructions of the NHAI under the IRB HMTL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of IRB HMTL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of IRB HMTL.

IRB HMTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the IRB HMTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by IRB HMTL for and in respect of the IRB HMTL Project Highway;

b) 90% of the IRB HMTL Debt Due excluding the subordinated debt;
c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by IRB HMTL, including the repayment of the revenue shortfall loan. IRB HMTL has agreed to give irrevocable instruction to the Escrow

Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the IRB HMTL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the IRB HMTL Concession Agreement;

f) outstanding IRB HMTL Debt Service including balance of IRB HMTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the IRB HMTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of IRB HMTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the IRB HMTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the IRB HMTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the IRB HMTL Concession Agreement and the costs thereof shall be expended by IRB HMTL and reimbursed by the NHAI.

If IRB HMTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the IRB HMTL Concession Agreement, or inform IRB HMTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of IRB HMTL being in material default or breach of the IRB HMTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the IRB HMTL Concession Agreement.

In the event of the NHAI being in material default of the IRB HMTL Concession Agreement at any time after the IRB HMTL Appointed Date, it shall pay to IRB HMTL by way of compensation, all direct costs suffered or incurred by IRB HMTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the IRB HMTL Concession Agreement.

In the event that a material default or breach of the IRB HMTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the IRB HMTL Concession Period as provided in the IRB HMTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the IRB HMTL Concession Agreement, the NHAI shall pay to IRB HMTL, for each day of the breach, compensation as provided in the IRB HMTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the IRB HMTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the IRB HMTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the IRB HMTL Concession Period shall, subject to payment of concession fee in accordance with the IRB HMTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in IRB HMTL Concession Period shall not in any case exceed 20% (twenty percent) of the IRB HMTL Concession Period.

Subject to the provisions of the IRB HMTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the IRB HMTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in IRB HMTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in IRB HMTL Concession Period under the IRB HMTL Concession Agreement, IRB HMTL may elect to pay, in addition to the concession fee that would be due and payable if the IRB HMTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by IRB HMTL no later than two years prior to the IRB HMTL Termination Date contemplated by the IRB HMTL Concession Agreement, NHAI shall waive the reduction in IRB HMTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in IRB HMTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the IRB HMTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the IRB HMTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The IRB HMTL Concession Period, may be extended so that it yields for IRB HMTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the IRB HMTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to IRB HMTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by IRB HMTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this IRB HMTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the IRB HMTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the IRB HMTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the IRB HMTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and IRB HMTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, IRB HMTL shall be deemed to be in default of the IRB HMTL Concession Agreement ("**IRB HMTL Default**"), unless the default has occurred solely as a result of any breach of the IRB HMTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the IRB HMTL Concession Agreement and IRB HMTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the IRB HMTL Concession Agreement, IRB HMTL fails to cure, within a cure period of 90 days, the IRB HMTL Default for which whole or part of the performance security was appropriated;

c) IRB HMTL does not achieve the latest outstanding project milestone due in accordance with the IRB HMTL Concession Agreement and continues to be in default for 90 days;

d) IRB HMTL abandons or manifests intention to abandon the construction or operation of the IRB HMTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the IRB HMTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the IRB HMTL Concession Agreement;

g) IRB HMTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) IRB HMTL has failed to make any payment to the NHAI within the period specified in the IRB HMTL Concession Agreement;

i) an escrow default has occurred and IRB HMTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and IRB HMTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by IRB HMTL has caused a material adverse effect;

l) IRB HMTL creates an encumbrance in breach of the IRB HMTL Concession Agreement;

m) IRB HMTL repudiates the IRB HMTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the IRB HMTL Concession Agreement;

n) a change in ownership has occurred in breach of the IRB HMTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of IRB HMTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of IRB HMTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of IRB HMTL has caused a material adverse effect;

q) IRB HMTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for IRB HMTL or for the whole or material part of its assets that has a material bearing on the IRB HMTL Project;

r) IRB HMTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of IRB HMTL is passed, or any petition for winding up of IRB HMTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or IRB HMTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of IRB HMTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of IRB HMTL under the IRB HMTL Concession Agreement and the project agreements; provided that:

    i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the IRB HMTL Concession Agreement and the project agreements;

    ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the IRB HMTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of IRB HMTL as at the IRB HMTL Appointed Date; and

    iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of IRB HMTL which is, as of the date hereof, found to be materially false, incorrect or misleading or IRB HMTL is at any time hereafter found to be in breach thereof;

u) IRB HMTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) IRB HMTL has failed to fulfil any obligation, for which failure termination has been specified in the IRB HMTL Concession Agreement; or

w) IRB HMTL commits a default in complying with any other provision of the IRB HMTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the IRB HMTL Concession Agreement, upon the occurrence of an IRB HMTL Default, the NHAI shall be entitled to terminate the IRB HMTL Concession Agreement by issuing a termination notice to IRB HMTL. Before issuing the termination notice, the NHAI shall, by notice, inform IRB HMTL of its intention to issue a termination notice and grant 15 days to IRB HMTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the IRB HMTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute IRB HMTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of IRB HMTL. On a written request from the lenders' representative and IRB HMTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by IRB HMTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the IRB HMTL Concession Agreement, the NHAI shall be deemed to be in default of the IRB HMTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the IRB HMTL Concession Agreement by IRB HMTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the IRB HMTL Concession Agreement and such default has a material adverse effect on IRB HMTL;

b) the NHAI has failed to make any payment to IRB HMTL within the period specified in the IRB HMTL Concession Agreement;

c) the NHAI repudiates the IRB HMTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the IRB HMTL Concession Agreement; or

d) the State of Uttar Pradesh commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on IRB HMTL and the breach continues for a period of 90 days from the date of notice given in this behalf by IRB HMTL to the NHAI.

Without prejudice to any other rights or remedies which IRB HMTL may have under the IRB HMTL Concession Agreement, upon the occurrence of an NHAI Default, IRB HMTL shall be entitled to terminate the IRB HMTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, IRB HMTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of an IRB HMTL Default during the operation period, the NHAI shall pay to IRB HMTL, by way of termination payment, an amount equal to 90% of the IRB HMTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of IRB HMTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to IRB HMTL, by way of termination payment, an amount equal to:

a) IRB HMTL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to IRB HMTL within 30 days of a demand being made by IRB HMTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the IRB HMTL Concession Agreement shall constitute a full and final settlement of all claims of IRB HMTL on account of termination of the IRB HMTL Concession Agreement for any reason whatsoever and IRB HMTL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

IRB HMTL shall be responsible for all defects and deficiencies in the IRB HMTL Project Highway for a period of 120 days after termination. IRB HMTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the IRB HMTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the IRB HMTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

4. Concession Agreement between IRB WTL and the NHAI dated March 25, 2013, as amended

IRB WTL has entered into a concession agreement for four-laning of Goa/Karnataka Border to Kundapur section from km 93.700 to km 283.300 of NH-17 in Karnataka on design, build, finance, operate and transfer (“**DBFOT**”) basis (the “**IRB WTL Concession Agreement**”), for a period of 28 years, from March 3, 2014 (“**IRB WTL Appointed Date**”) or until such date on which the IRB WTL Concession Agreement is terminated by a termination notice (“**IRB WTL Termination Date**”, and the period between the IRB WTL Appointed Date and the IRB WTL Termination Date, the “**IRB WTL Concession Period**”).

Certain Definitions

“**IRB WTL Debt Due**” shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the “**Principa**l”) but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the IRB WTL Debt Due is convertible into equity at the option of the senior lenders and/or IRB WTL, it shall, for the purposes of the IRB WTL Concession Agreement, be deemed to be IRB WTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**IRB WTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**IRB WTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of IRB WTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the IRB WTL Project Highway (as defined below), but does not include additional facilities;

"**IRB WTL Project Highway**" shall mean the site comprising the existing road comprising NH-17 from km 93.700 to km 283.300 and all IRB WTL Project Assets, and its subsequent development and augmentation in accordance with the IRB WTL Concession Agreement;

"**IRB WTL Project**" shall mean the construction, operation, and maintenance of the IRB WTL Project Highway in accordance with the provisions of the IRB WTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Grant**" shall mean the cash support provided to IRB WTL by the NHAI which is equal to the sum set forth in the bid.

Grant of Concession

Subject to, and in accordance with the provisions set out in the IRB WTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to IRB WTL, and IRB WTL has accepted the concession, including the exclusive right, license, and authority to construct, operate and maintain the IRB WTL Project for a period of 28 years from the IRB WTL Appointed Date.

Subject to, and in accordance with the provisions of the IRB WTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, IRB WTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the IRB WTL Concession Agreement;

b) finance and construct the IRB WTL Project Highway;

c) manage, operate, and maintain the IRB WTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and users liable for payment of fee for using the IRB WTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of IRB WTL's obligations under and in accordance with the IRB WTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of IRB WTL under the IRB WTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the IRB WTL Concession Agreement, or the concession granted, or on the whole or any part of the IRB WTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the IRB WTL Concession Agreement or the agreement for the substitution of IRB WTL entered into by IRB WTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, IRB WTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the IRB WTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. In accordance with the IRB WTL Concession Agreement, IRB WTL shall not collect any fees in relation to exempted vehicles.

IRB WTL shall not collect any fee from a local user for non-commercial use of the IRB WTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the IRB WTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, IRB WTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, IRB WTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the IRB WTL Project Highway and does not cross a toll plaza.

Grant

The NHAI has agreed to pay to IRB WTL cash support by way of an outright grant equal to ₹5,362.2 million as set out in the bid. The grant shall be disbursed to IRB WTL by way of equity support. It shall be credited to the Escrow Account (as defined below) and shall be applied by IRB WTL for meeting the total project cost. The equity support shall not exceed the sum specified, but shall in no case be greater than twice the equity, and shall be further restricted to a sum not exceeding 40% of the total project cost.

The equity support shall be due and payable to IRB WTL after it has expended the equity, and shall be disbursed proportionately along with the loan funds thereafter remaining to be disbursed by the senior lenders under the financing agreements. The NHAI shall disburse each tranche of the equity support as and when due, but no later than 15 days of receiving a request from IRB WTL along with necessary particulars. In the event of the occurrence of an IRB WTL Default (as defined below), disbursement of equity support shall be suspended till the IRB WTL Default has been cured.

Concession Fee

In consideration of the grant of concession, IRB WTL shall pay to the NHAI by way of concession fee a sum of ₹1.00 per annum.

The concession fee payable under the provisions of the IRB WTL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

IRB WTL was required to, prior to the IRB WTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the IRB WTL Concession Agreement read with the escrow agreement entered into amongst IRB WTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

IRB WTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the IRB WTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

IRB WTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by IRB WTL for and in respect of the IRB WTL Project Highway;

b) all payments relating to construction of the IRB WTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the IRB WTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of IRB WTL Debt Service due in an accounting year;

g) all payments and damages certified by the NHAI as due and payable to it by IRB WTL, including repayment of revenue shortfall loan.

h) monthly proportionate provision of IRB WTL Debt Service payments due in an accounting year in respect of subordinated debt;

i) any reserve requirements set forth in the financing agreements; and

j) balance, if any, in accordance with the instructions of IRB WTL.

IRB WTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the IRB WTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by IRB WTL for and in respect of the IRB WTL Project Highway;

b) 90% of the IRB WTL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by IRB WTL, including the repayment of the revenue shortfall loan. retention and payments relating to the liability for defects and deficiencies set forth in the IRB WTL Concession Agreement;

e) outstanding IRB WTL Debt Service including balance of IRB WTL Debt Due;

f) outstanding subordinated debt;

g) incurred or accrued O&M expenses;

h) any other payments required to be made under the IRB WTL Concession Agreement; and

i) balance, if any, in accordance with the instructions of IRB WTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the IRB WTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the IRB WTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the IRB WTL Concession Agreement and the costs thereof shall be expended by IRB WTL and reimbursed by the NHAI.

If IRB WTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 15 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the IRB WTL Concession Agreement, or inform IRB WTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of IRB WTL being in material default or breach of the IRB WTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the IRB WTL Concession Agreement.

In the event of the NHAI being in material default of the IRB WTL Concession Agreement at any time after the IRB WTL Appointed Date, it shall pay to IRB WTL by way of compensation, all direct costs suffered or incurred by IRB WTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the IRB WTL Concession Agreement.

In the event that a material default or breach of the IRB WTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the IRB WTL Concession Period as provided in the IRB WTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the IRB WTL Concession Agreement, the NHAI shall pay to IRB WTL, for each day of the breach, compensation as provided in the IRB WTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the IRB WTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the IRB WTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the IRB WTL Concession Period shall, subject to payment of concession fee in accordance with the IRB WTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in IRB WTL Concession Period shall not in any case exceed 20% (twenty percent) of the IRB WTL Concession Period.

Subject to the provisions of the IRB WTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the IRB WTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in IRB WTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in IRB WTL Concession Period under the IRB WTL Concession Agreement, IRB WTL may elect to pay, in addition to the concession fee that would be due and payable if the IRB WTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by IRB WTL no later than two years prior to the IRB WTL Termination Date contemplated by the IRB WTL Concession Agreement, NHAI shall waive the reduction in IRB WTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in IRB WTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the IRB WTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the IRB WTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The IRB WTL Concession Period, may be extended so that it yields for IRB WTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the IRB WTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to IRB WTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by IRB WTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this IRB WTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the IRB WTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the IRB WTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the IRB WTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and IRB WTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, IRB WTL shall be deemed to be in default of the IRB WTL Concession Agreement ("**IRB WTL Default**"), unless the default has occurred solely as a result of any breach of the IRB WTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the IRB WTL Concession Agreement and IRB WTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the IRB WTL Concession Agreement, IRB WTL fails to cure, within a cure period of 90 days, the IRB WTL Default for which whole or part of the performance security was appropriated;

c) IRB WTL does not achieve the latest outstanding project milestone due in accordance with the IRB WTL Concession Agreement and continues to be in default for 120 days;
d) IRB WTL abandons or manifests intention to abandon the construction or operation of the IRB WTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the IRB WTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the IRB WTL Concession Agreement;

g) IRB WTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) IRB WTL has failed to make any payment to the NHAI within the period specified in the IRB WTL Concession Agreement;

i) an escrow default has occurred and IRB WTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and IRB WTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by IRB WTL has caused a material adverse effect;

l) IRB WTL creates an encumbrance in breach of the IRB WTL Concession Agreement;

m) IRB WTL repudiates the IRB WTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the IRB WTL Concession Agreement;

n) a change in ownership has occurred in breach of the IRB WTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of IRB WTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of IRB WTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of IRB WTL has caused a material adverse effect;

q) IRB WTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for IRB WTL or for the whole or material part of its assets that has a material bearing on the IRB WTL Project;

r) IRB WTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of IRB WTL is passed, or any petition for winding up of IRB WTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or IRB WTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of IRB WTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of IRB WTL under the IRB WTL Concession Agreement and the project agreements; provided that:

    i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the IRB WTL Concession Agreement and the project agreements;

    ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the IRB WTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of IRB WTL as at the IRB WTL Appointed Date; and

    iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of IRB WTL which is, as of the date hereof, found to be materially false, incorrect or misleading or IRB WTL is at any time hereafter found to be in breach thereof;

u) IRB WTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) IRB WTL has failed to fulfil any obligation, for which failure termination has been specified in the IRB WTL Concession Agreement; or

w) IRB WTL commits a default in complying with any other provision of the IRB WTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the IRB WTL Concession Agreement, upon the occurrence of an IRB WTL Default, the NHAI shall be entitled to terminate the IRB WTL Concession Agreement by issuing a termination notice to IRB WTL. Before issuing the termination notice, the NHAI shall, by notice, inform IRB WTL of its intention to issue a termination notice and grant 15 days to IRB

WTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the IRB WTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 15 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute IRB WTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of IRB WTL. On a written request from the lenders' representative and IRB WTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by IRB WTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the IRB WTL Concession Agreement, the NHAI shall be deemed to be in default of the IRB WTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the IRB WTL Concession Agreement by IRB WTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the IRB WTL Concession Agreement and such default has a material adverse effect on IRB WTL;

b) the NHAI has failed to make any payment to IRB WTL within the period specified in the IRB WTL Concession Agreement;

c) the NHAI repudiates the IRB WTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the IRB WTL Concession Agreement; or

d) the State of Karnataka commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on IRB WTL and the breach continues for a period of 90 days from the date of notice given in this behalf by IRB WTL to the NHAI.

Without prejudice to any other rights or remedies which IRB WTL may have under the IRB WTL Concession Agreement, upon the occurrence of an NHAI Default, IRB WTL shall be entitled to terminate the IRB WTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, IRB WTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of an IRB WTL Default during the operation period, the NHAI shall pay to IRB WTL, by way of termination payment, an amount equal to 90% of the IRB WTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of IRB WTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to IRB WTL, by way of termination payment, an amount equal to:

a) IRB WTL Debt Due; and
b) 150% of the adjusted equity.

Termination payment shall become due and payable to IRB WTL within 15 days of a demand being made by IRB WTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the IRB WTL Concession Agreement shall constitute a full and final settlement of all claims of IRB WTL on account of termination of the IRB WTL Concession Agreement for any reason whatsoever and IRB WTL, or any shareholder thereof, shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

IRB WTL shall be responsible for all defects and deficiencies in the IRB WTL Project Highway for a period of 120 days after termination. IRB WTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the IRB WTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the IRB WTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

5. Concession Agreement between KGTL and the NHAI dated February 22, 2017, as amended

KGTL has entered into a concession agreement for six-laning of Kishangarh to Gulabpura section of NH-79A and NH-79 in Rajasthan with a length of 90.000 km on design, build, finance, operate and transfer ("D**BFOT**") basis (the "**KGTL Concession Agreement**"), for a period of 20 years, from February 21, 2018 ("**KGTL Appointed Date**") or until such date on which the KGTL Concession Agreement is terminated by a termination notice ("**KGTL Termination Date**", and the period between the KGTL Appointed Date and the KGTL Termination Date, the "**KGTL Concession Period**").

Certain Definitions

"**KGTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the KGTL Debt Due is convertible into equity at the option of the senior lenders and/or KGTL, it shall, for the purposes of the KGTL Concession Agreement, be deemed to be KGTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**KGTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**KGTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of KGTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the KGTL Project Highway (as defined below), but does not include additional facilities;

"**KGTL Project Highway**" shall mean the site comprising the existing road comprising NH-79A and 79 from km 0.000 to km 90.000 and all KGTL Project Assets, and its subsequent development and augmentation in accordance with the KGTL Concession Agreement;

"**KGTL Project**" shall mean the construction, operation, and maintenance of the KGTL Project Highway in accordance with the provisions of the KGTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project;

"**Premium**" shall mean an amount paid to the NHAI by KGTL in the form of an additional concession fee, as set forth in the bid for each year of the KGTL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the KGTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to KGTL, and KGTL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the KGTL Concession Agreement, to construct, operate and maintain the KGTL Project for a period of 20 years from the KGTL Appointed Date.

Subject to, and in accordance with the provisions of the KGTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, KGTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the KGTL Concession Agreement;

b) finance and construct the KGTL Project Highway;

c) manage, operate, and maintain the KGTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the KGTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of KGTL's obligations under and in accordance with the KGTL Concession Agreement;
f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of KGTL under the KGTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the KGTL Concession Agreement, or the concession granted, or on the whole or any part of the KGTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the KGTL Concession Agreement or the agreement for the substitution of KGTL entered into by KGTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, KGTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the KGTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, KGTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the KGTL Concession Agreement, KGTL shall not collect any fees in relation to exempted vehicles.

KGTL shall not collect any fee from a local user for non-commercial use of the KGTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the KGTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, KGTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, KGTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the KGTL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, KGTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, KGTL was required to pay to the NHAI, immediately after the third anniversary year of the COD, a Premium in the form of an additional concession fee equal to ₹1,863 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the KGTL Concession Period, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 8% as compared to the immediately preceding year. The Premium is deemed to be a part of the concession fee.

The concession fee payable under the provisions of the KGTL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

KGTL was required to, prior to the KGTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the KGTL Concession Agreement read with the escrow agreement entered into amongst KGTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

KGTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the KGTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and
c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

KGTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by KGTL for and in respect of the KGTL Project Highway;

b) all payments relating to construction of the KGTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the KGTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of KGTL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by KGTL, including repayment of revenue shortfall loan. KGTL has agreed to give irrevocable instructions to the Escrow Bank to make payments from the Escrow Account in accordance with the instructions of the NHAI under the KGTL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of KGTL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of KGTL.

KGTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the KGTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by KGTL for and in respect of the KGTL Project Highway;

b) 90% of the KGTL Debt Due excluding the subordinated debt;
c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by KGTL, including the repayment of the revenue shortfall loan. KGTL has agreed to give irrevocable instruction to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the KGTL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the KGTL Concession Agreement;

f) outstanding KGTL Debt Service including balance of KGTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the KGTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of KGTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the KGTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the KGTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the KGTL Concession Agreement and the costs thereof shall be expended by KGTL and reimbursed by the NHAI.

If KGTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the KGTL Concession Agreement, or inform KGTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of KGTL being in material default or breach of the KGTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the KGTL Concession Agreement.

In the event of the NHAI being in material default of the KGTL Concession Agreement at any time after the KGTL Appointed Date, it shall pay to KGTL by way of compensation, all direct costs suffered or incurred by KGTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the KGTL Concession Agreement.

In the event that a material default or breach of the KGTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the KGTL Concession Period as provided in the KGTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the KGTL Concession Agreement, the NHAI shall pay to KGTL, for each day of the breach, compensation as provided in the KGTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the KGTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the KGTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the KGTL Concession Period shall, subject to payment of concession fee in accordance with the KGTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in KGTL Concession Period shall not in any case exceed 20% (twenty percent) of the KGTL Concession Period.

Subject to the provisions of the KGTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the KGTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in KGTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in KGTL Concession Period under the KGTL Concession Agreement, KGTL may elect to pay, in addition to the concession fee that would be due and payable if the KGTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by KGTL no later than two years prior to the KGTL Termination Date contemplated by the KGTL Concession Agreement, NHAI shall waive the reduction in KGTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in KGTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the KGTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the KGTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The KGTL Concession Period, may be extended so that it yields for KGTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the KGTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to KGTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by KGTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this KGTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the KGTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the KGTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the KGTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and KGTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, KGTL shall be deemed to be in default of the KGTL Concession Agreement ("**KGTL Default**"), unless the default has occurred solely as a result of any breach of the KGTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the KGTL Concession Agreement and KGTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the KGTL Concession Agreement, KGTL fails to cure, within a cure period of 90 days, the KGTL Default for which whole or part of the performance security was appropriated;

c) KGTL does not achieve the latest outstanding project milestone due in accordance with the KGTL Concession Agreement and continues to be in default for 90 days;

d) KGTL abandons or manifests intention to abandon the construction or operation of the KGTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the KGTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the KGTL Concession Agreement;

g) KGTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) KGTL has failed to make any payment to the NHAI within the period specified in the KGTL Concession Agreement;

i) an escrow default has occurred and KGTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and KGTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by KGTL has caused a material adverse effect;

l) KGTL creates an encumbrance in breach of the KGTL Concession Agreement;

m) KGTL repudiates the KGTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the KGTL Concession Agreement;

n) a change in ownership has occurred in breach of the KGTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of KGTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of KGTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of KGTL has caused a material adverse effect;

q) KGTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for KGTL or for the whole or material part of its assets that has a material bearing on the KGTL Project;

r) KGTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of KGTL is passed, or any petition for winding up of KGTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or KGTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of KGTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of KGTL under the KGTL Concession Agreement and the project agreements; provided that:

i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the KGTL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the KGTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of KGTL as at the KGTL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of KGTL which is, as of the date hereof, found to be materially false, incorrect or misleading or KGTL is at any time hereafter found to be in breach thereof;

u) KGTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) KGTL has failed to fulfil any obligation, for which failure termination has been specified in the KGTL Concession Agreement; or

w) KGTL commits a default in complying with any other provision of the KGTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the KGTL Concession Agreement, upon the occurrence of a KGTL Default, the NHAI shall be entitled to terminate the KGTL Concession Agreement by issuing a termination notice to KGTL. Before issuing the termination notice, the NHAI shall, by notice, inform KGTL of its intention to issue a termination notice and grant 15 days to KGTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the KGTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute KGTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of KGTL. On a written request from the lenders' representative and KGTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by KGTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the KGTL Concession Agreement, the NHAI shall be deemed to be in default of the KGTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the KGTL Concession Agreement by KGTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the KGTL Concession Agreement and such default has a material adverse effect on KGTL;

b) the NHAI has failed to make any payment to KGTL within the period specified in the KGTL Concession Agreement;

c) the NHAI repudiates the KGTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the KGTL Concession Agreement; or

d) the State of Rajasthan commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on KGTL and the breach continues for a period of 90 days from the date of notice given in this behalf by KGTL to the NHAI.

Without prejudice to any other rights or remedies which KGTL may have under the KGTL Concession Agreement, upon the occurrence of an NHAI Default, KGTL shall be entitled to terminate the KGTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, KGTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a KGTL Default during the operation period, the NHAI shall pay to KGTL, by way of termination payment, an amount equal to 90% of the KGTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of KGTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to KGTL, by way of termination payment, an amount equal to:

a) KGTL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to KGTL within 30 days of a demand being made by KGTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the KGTL Concession Agreement shall constitute a full and final settlement of all claims of KGTL on account of termination of the KGTL Concession Agreement for any reason whatsoever and KGTL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

KGTL shall be responsible for all defects and deficiencies in the KGTL Project Highway for a period of 120 days after termination. KGTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the KGTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the KGTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

6. Concession Agreement between KTL and the NHAI dated June 23, 2014

KTL has entered into a concession agreement for four-laning of Kaithal – Rajasthan border section of NH-152/65 in Haryana from km 33+250 (design km -0.500) to km 241+580 (design km 165.759) on design, build, finance, operate and transfer ("**DBFOT**") basis (the "**KTL Concession Agreement**"), for a period of 27 years, from July 15, 2015 ("**KTL Appointed Date**") or until such date on which the KTL Concession Agreement is terminated by a termination notice ("**KTL Termination Date**", and the period between the KTL Appointed Date and the KTL Termination Date, the "**KTL Concession Period**").

Certain Definitions

"**KTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principal**") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the KTL Debt Due is convertible into equity at the option of the senior lenders and/or KTL, it shall, for the purposes of the KTL Concession Agreement, be deemed to be KTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**KTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**KTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of KTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the KTL Project Highway (as defined below), but does not include additional facilities;

"**KTL Project Highway**" shall mean the site comprising the existing road comprising NH-152/65 from km 33.250 to km 241.580 and all KTL Project Assets, and its subsequent development and augmentation in accordance with the KTL Concession Agreement;

"**KTL Project**" shall mean the construction, operation, and maintenance of the KTL Project Highway in accordance with the provisions of the KTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Grant**" shall mean the cash support provided to KTL by the NHAI which is equal to the sum set forth in the bid.

Grant of Concession

Subject to, and in accordance with the provisions set out in the KTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to KTL, and KTL has accepted the concession, including the exclusive right, license, and authority to construct, operate and maintain the KTL Project for a period of 27 years from the KTL Appointed Date.

Subject to, and in accordance with the provisions of the KTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, KTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the KTL Concession Agreement;

b) finance and construct the KTL Project Highway;

c) manage, operate, and maintain the KTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and users liable for payment of fee for using the KTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of KTL's obligations under and in accordance with the KTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of KTL under the KTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the KTL Concession Agreement, or the concession granted, or on the whole or any part of the KTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the KTL Concession Agreement or the agreement for the substitution of KTL entered into by KTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, KTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the KTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, KTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the KTL Concession Agreement, KTL shall not collect any fees in relation to exempted vehicles.

KTL shall not collect any fee from a local user for non-commercial use of the KTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the KTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, KTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, KTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the KTL Project Highway and does not cross a toll plaza.

Grant

The NHAI has agreed to pay to KTL cash support by way of an outright grant equal to ₹2340 million as set out in the bid. The grant shall be disbursed to KTL by way of equity support. It shall be credited to the Escrow Account (as defined below) and shall be applied by KTL for meeting the total project cost. The equity support shall not exceed the sum specified, but shall in no case be greater than twice the equity, and shall be further restricted to a sum not exceeding 40% of the total project cost.

The equity support shall be due and payable to KTL after it has expended the equity, and shall be disbursed proportionately along with the loan funds thereafter remaining to be disbursed by the senior lenders under the financing agreements. The NHAI shall disburse each tranche of the equity support as and when due, but no later than 15 days of receiving a request from KTL along with necessary particulars. In the event of the occurrence of a KTL Default (as defined below), disbursement of equity support shall be suspended till the KTL Default has been cured.

Concession Fee

In consideration of the grant of concession, KTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Escrow Account

KTL was required to, prior to the KTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the KTL Concession Agreement read with the escrow agreement entered into amongst KTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

KTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the KTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

KTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by KTL for and in respect of the KTL Project Highway;

b) all payments relating to construction of the KTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the KTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of KTL Debt Service due in an accounting year;

g) all payments and damages certified by the NHAI as due and payable to it by KTL, including repayment of revenue shortfall loan.

h) monthly proportionate provision of KTL Debt Service payments due in an accounting year in respect of subordinated debt;

i) any reserve requirements set forth in the financing agreements; and

j) balance, if any, in accordance with the instructions of KTL.

KTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the KTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by KTL for and in respect of the KTL Project Highway;

b) 90% of the KTL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by KTL, including the repayment of the revenue shortfall loan.

e) retention and payments relating to the liability for defects and deficiencies set forth in the KTL Concession Agreement;

f) outstanding KTL Debt Service including balance of KTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the KTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of KTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the KTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the KTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the KTL Concession Agreement and the costs thereof shall be expended by KTL and reimbursed by the NHAI.

If KTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 15 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the KTL Concession Agreement, or inform KTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of KTL being in material default or breach of the KTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the KTL Concession Agreement.

In the event of the NHAI being in material default of the KTL Concession Agreement at any time after the KTL Appointed Date, it shall pay to KTL by way of compensation, all direct costs suffered or incurred by KTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the KTL Concession Agreement.

In the event that a material default or breach of the KTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the KTL Concession Period as provided in the KTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the KTL Concession Agreement, the NHAI shall pay to KTL, for each day of the breach, compensation as provided in the KTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the KTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the KTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the KTL Concession Period shall, subject to payment of concession fee in accordance with the KTL Concession

Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in KTL Concession Period shall not in any case exceed 20% (twenty percent) of the KTL Concession Period.

Subject to the provisions of the KTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the KTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in KTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in KTL Concession Period under the KTL Concession Agreement, KTL may elect to pay, in addition to the concession fee that would be due and payable if the KTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by KTL no later than two years prior to the KTL Termination Date contemplated by the KTL Concession Agreement, NHAI shall waive the reduction in KTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in KTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the KTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the KTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The KTL Concession Period, may be extended so that it yields for KTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the KTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to KTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by KTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this KTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the KTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the KTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the KTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and KTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, KTL shall be deemed to be in default of the KTL Concession Agreement ("**KTL Default**"), unless the default has occurred solely as a result of any breach of the KTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the KTL Concession Agreement and KTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the KTL Concession Agreement, KTL fails to cure, within a cure period of 90 days, the KTL Default for which whole or part of the performance security was appropriated;

c) KTL does not achieve the latest outstanding project milestone due in accordance with the KTL Concession Agreement and continues to be in default for 120 days;

d) KTL abandons or manifests intention to abandon the construction or operation of the KTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the KTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the KTL Concession Agreement;

g) KTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) KTL has failed to make any payment to the NHAI within the period specified in the KTL Concession Agreement;

i) an escrow default has occurred and KTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and KTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by KTL has caused a material adverse effect;

l) KTL creates an encumbrance in breach of the KTL Concession Agreement;

m) KTL repudiates the KTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the KTL Concession Agreement;

n) a change in ownership has occurred in breach of the KTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of KTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of KTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of KTL has caused a material adverse effect;

q) KTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for KTL or for the whole or material part of its assets that has a material bearing on the KTL Project;

r) KTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of KTL is passed, or any petition for winding up of KTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or KTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of KTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of KTL under the KTL Concession Agreement and the project agreements; provided that:

    i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the KTL Concession Agreement and the project agreements;

    ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the KTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of KTL as at the KTL Appointed Date; and

    iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of KTL which is, as of the date hereof, found to be materially false, incorrect or misleading or KTL is at any time hereafter found to be in breach thereof;

u) KTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) KTL has failed to fulfil any obligation, for which failure termination has been specified in the KTL Concession Agreement; or

w) KTL commits a default in complying with any other provision of the KTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the KTL Concession Agreement, upon the occurrence of a KTL Default, the NHAI shall be entitled to terminate the KTL Concession Agreement by issuing a termination notice to KTL. Before issuing the termination notice, the NHAI shall, by notice, inform KTL of its intention to issue a termination notice and grant 15 days to KTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the KTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 15 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute KTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of KTL. On a written request from the lenders' representative and KTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by KTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the KTL Concession Agreement, the NHAI shall be deemed to be in default of the KTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the KTL Concession Agreement by KTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the KTL Concession Agreement and such default has a material adverse effect on KTL;

b) the NHAI has failed to make any payment to KTL within the period specified in the KTL Concession Agreement;

c) the NHAI repudiates the KTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the KTL Concession Agreement; or

d) the State of Haryana commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on KTL and the breach continues for a period of 90 days from the date of notice given in this behalf by KTL to the NHAI.

Without prejudice to any other rights or remedies which KTL may have under the KTL Concession Agreement, upon the occurrence of an NHAI Default, KTL shall be entitled to terminate the KTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, KTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a KTL Default during the operation period, the NHAI shall pay to KTL, by way of termination payment, an amount equal to 90% of the KTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of KTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to KTL, by way of termination payment, an amount equal to:

a) KTL Debt Due; and
b) 150% of the adjusted equity.

Termination payment shall become due and payable to KTL within 15 days of a demand being made by KTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the KTL Concession Agreement shall constitute a full and final settlement of all claims of KTL on account of termination of the KTL Concession Agreement for any reason whatsoever and KTL, or any shareholder thereof, shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

KTL shall be responsible for all defects and deficiencies in the KTL Project Highway for a period of 120 days after termination. KTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the KTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the KTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

6.1. Supplementary Agreement between KTL and the NHAI dated April 5, 2018

KTL has entered into a supplementary agreement (the "**Supplementary Agreement**") to amend the concession agreement dated June 23, 2014 (the "**Concession Agreement**") to provide for the installation of a new electronic toll collection system (the "**Hybrid ETC System**") for electronic payment of user fee using RFID tags or any other such device.

Change of Scope

The NHAI shall provide a change in the scope of work order at prices discovered by the NHAI to KTL to provide for, as per the defined technical specifications, installation, testing, commissioning, operations and maintenance of the Hybrid ETC System in all lanes of the toll plaza. KTL shall ensure that the requisite civil work is completed prior to the installation, integration, testing and commissioning of the Hybrid ETC System. It shall also ensure the smooth flow of traffic during installation, integration, testing and commissioning of the Hybrid ETC System. KTL will have no claim against the NHAI on account of any lane closure, if any, on account of any third party claims.

Scope of Work

KTL shall install, integrate, test, commission, operate and maintain the Hybrid ETC System in all the lanes of the toll plazas. The Hybrid ETC System shall be installed, commissioned, operated and maintained for a period of five years or the end of the Concession Agreement, whichever is earlier, beyond which it will be replaced or renewed, as the case may be, by KTL or the NHAI, at the cost of the NHAI. The cycle shall be maintained till the end of the concession period in accordance with the Concession Agreement.

The provisions of the Concession Agreement relating to change of scope shall not apply to the Supplementary Agreement.

Any permission required by KTL under the applicable laws for the installation of the Hybrid ETC System shall be procured and maintained by KTL. The NHAI shall provide reasonable assistance in this regard.

Timeline

KTL shall complete all responsibilities, obligations and works as described in the Supplementary Agreement within a period of 120 days from the date of signing the Supplementary Agreement.

Damages for Delay

In case of delay in installation, testing, or commissioning of the Hybrid ETC System at the toll plazas as per the time schedule prescribed on account of reasons attributable to KTL, damages at 0.1% of the cost of installation, testing, or commissioning of the Hybrid ETC System for each day of the delay, subject to a maximum of 10% of the cost of installation, testing, or commissioning of the Hybrid ETC System shall be levied on KTL. Damages for delay will not be applicable in case of a delay in implementation due to delayed payment release by the NHAI.

KTL shall not be entitled to any additional benefit either in monetary terms or on any other account including, but not limited to any extension of time, save on account of and NHAI Default or force majeure.

Compensation

In case of any damage to the Hybrid ETC System due to any act or omission of KTL, the NHAI shall not be liable for any compensation to KTL, and KTL shall bear the cost of repair, replacement or renewal of the damaged Hybrid ETC System equipment or hardware itself.

In case of any damage to the Hybrid ETC System due to the occurrence of any force majeure event, the compensation to KTL shall be derived as per the provisions of the Concession Agreement.

End of the Concession Period

KTL shall hand over all the Hybrid ETC equipment or hardware in an operational condition to the NHAI or a third party as directed by the NHAI at the end of the concession period, beyond which no O&M payment shall be made to KTL. If any Hybrid ETC System equipment or hardware is found to be non-operational, then KTL shall be liable to replace or pay for the replacement of the Hybrid ETC System equipment or hardware required to make the Hybrid ETC System operational on all lanes of the toll plazas to the NHAI promptly.

Upon termination, KTL shall assign warranties received from the original equipment manufacturer and for the components or equipment, and provide the respective warranty assignment agreements and necessary documents. KTL shall ensure that all the warranties are duly assigned in favor of the NHAI and KTL shall bear the cost and expenses towards the assignment.

7. Concession Agreement between SYTL and the NHAI dated March 3, 2014, as amended

SYTL has entered into a concession agreement for four-laning of Solapur to Yedeshi section of NH-211 in Maharashtra from km 0.000 to km 100.000 (design length – 98.717 km) on build, operate and transfer ("**BOT**") basis (the "**SYTL Concession Agreement**"), for a period of 29 years, from January 21, 2015 ("**SYTL Appointed Date**") or until such date on which the SYTL Concession Agreement is terminated by a termination notice ("**SYTL Termination Date**", and the period between the SYTL Appointed Date and the SYTL Termination Date, the "**SYTL Concession Period**").

Certain Definitions

"**SYTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the SYTL Debt Due is convertible into equity at the option of the senior lenders and/or SYTL, it shall, for the purposes of the SYTL Concession Agreement, be deemed to be SYTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**SYTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**SYTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of SYTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the SYTL Project Highway (as defined below), but does not include additional facilities;

"**SYTL Project Highway**" shall mean the site comprising the existing road comprising NH-211 from km 0.000 to km 100.000 and all SYTL Project Assets, and its subsequent development and augmentation in accordance with the SYTL Concession Agreement;

"**SYTL Project**" shall mean the construction, operation, and maintenance of the SYTL Project Highway in accordance with the provisions of the SYTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Grant**" shall mean the cash support provided to SYTL by the NHAI which is equal to the sum set forth in the bid.

Grant of Concession

Subject to, and in accordance with the provisions set out in the SYTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to SYTL, and SYTL has accepted the concession, including the exclusive right, license, and authority to construct, operate and maintain the SYTL Project for a period of 29 years from the SYTL Appointed Date.

Subject to, and in accordance with the provisions of the SYTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, SYTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the SYTL Concession Agreement;

b) finance and construct the SYTL Project Highway;

c) manage, operate, and maintain the SYTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and users liable for payment of fee for using the SYTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of SYTL's obligations under and in accordance with the SYTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of SYTL under the SYTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the SYTL Concession Agreement, or the concession granted, or on the whole or any part of the SYTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the SYTL Concession Agreement or the agreement for the substitution of SYTL entered into by SYTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, SYTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the SYTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, SYTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the SYTL Concession Agreement, SYTL shall not collect any fees in relation to exempted vehicles.

SYTL shall not collect any fee from a local user for non-commercial use of the SYTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the SYTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, SYTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, SYTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the SYTL Project Highway and does not cross a toll plaza.

Grant

The NHAI has agreed to pay to SYTL cash support by way of an outright grant equal to ₹1,890 million as set out in the bid. The grant shall be disbursed to SYTL by way of equity support. It shall be credited to the Escrow Account (as defined below) and shall be applied by SYTL for meeting the total project cost. The equity support shall not exceed the sum specified, but shall in no case be greater than twice the equity, and shall be further restricted to a sum not exceeding 40% of the total project cost.

The equity support shall be due and payable to SYTL after it has expended the equity, and shall be disbursed proportionately along with the loan funds thereafter remaining to be disbursed by the senior lenders under the financing agreements. The NHAI shall disburse each tranche of the equity support as and when due, but no later than 15 days of receiving a request from SYTL along with necessary particulars. In the event of the occurrence of an SYTL Default (as defined below), disbursement of equity support shall be suspended till the SYTL Default has been cured.

Concession Fee

In consideration of the grant of concession, SYTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Escrow Account

SYTL was required to, prior to the SYTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the SYTL Concession Agreement read with the escrow agreement entered into amongst SYTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

SYTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the SYTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

SYTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by SYTL for and in respect of the SYTL Project Highway;

b) all payments relating to construction of the SYTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the SYTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of SYTL Debt Service due in an accounting year;

g) all payments and damages certified by the NHAI as due and payable to it by SYTL, including repayment of revenue shortfall loan.

h) monthly proportionate provision of SYTL Debt Service payments due in an accounting year in respect of subordinated debt;

i) any reserve requirements set forth in the financing agreements; and

j) balance, if any, in accordance with the instructions of SYTL.

SYTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the SYTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by SYTL for and in respect of the SYTL Project Highway;

b) 90% of the SYTL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by SYTL, including the repayment of the revenue shortfall loan.

e) retention and payments relating to the liability for defects and deficiencies set forth in the SYTL Concession Agreement;

f) outstanding SYTL Debt Service including balance of SYTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the SYTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of SYTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the SYTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the SYTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the SYTL Concession Agreement and the costs thereof shall be expended by SYTL and reimbursed by the NHAI.

If SYTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 15 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the SYTL Concession Agreement, or inform SYTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of SYTL being in material default or breach of the SYTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the SYTL Concession Agreement.

In the event of the NHAI being in material default of the SYTL Concession Agreement at any time after the SYTL Appointed Date, it shall pay to SYTL by way of compensation, all direct costs suffered or incurred by SYTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the SYTL Concession Agreement.

In the event that a material default or breach of the SYTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the SYTL Concession Period as provided in the SYTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the SYTL Concession Agreement, the NHAI shall pay to SYTL, for each day of the breach, compensation as provided in the SYTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the SYTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the SYTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the SYTL Concession Period shall, subject to payment of concession fee in accordance with the SYTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in SYTL Concession Period shall not in any case exceed 20% (twenty percent) of the SYTL Concession Period.

Subject to the provisions of the SYTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the SYTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in SYTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in SYTL Concession Period under the SYTL Concession Agreement, SYTL may elect to pay, in addition to the concession fee that would be due and payable if the SYTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by SYTL no later than two years prior to the SYTL Termination Date contemplated by the SYTL Concession Agreement, NHAI shall waive the reduction in SYTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in SYTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the SYTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the SYTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The SYTL Concession Period, may be extended so that it yields for SYTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the SYTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to SYTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by SYTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this SYTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the SYTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the SYTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the SYTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and SYTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, SYTL shall be deemed to be in default of the SYTL Concession Agreement ("**SYTL Default**"), unless the default has occurred solely as a result of any breach of the SYTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the SYTL Concession Agreement and SYTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the SYTL Concession Agreement, SYTL fails to cure, within a cure period of 90 days, the SYTL Default for which whole or part of the performance security was appropriated;

c) SYTL does not achieve the latest outstanding project milestone due in accordance with the SYTL Concession Agreement and continues to be in default for 120 days;

d) SYTL abandons or manifests intention to abandon the construction or operation of the SYTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the SYTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the SYTL Concession Agreement;

g) SYTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) SYTL has failed to make any payment to the NHAI within the period specified in the SYTL Concession Agreement;

i) an escrow default has occurred and SYTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and SYTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by SYTL has caused a material adverse effect;

l) SYTL creates an encumbrance in breach of the SYTL Concession Agreement;

m) SYTL repudiates the SYTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the SYTL Concession Agreement;

n) a change in ownership has occurred in breach of the SYTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of SYTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of SYTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of SYTL has caused a material adverse effect;

q) SYTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for SYTL or for the whole or material part of its assets that has a material bearing on the SYTL Project;

r) SYTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of SYTL is passed, or any petition for winding up of SYTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or SYTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of SYTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of SYTL under the SYTL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the SYTL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the SYTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of SYTL as at the SYTL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of SYTL which is, as of the date hereof, found to be materially false, incorrect or misleading or SYTL is at any time hereafter found to be in breach thereof;

u) SYTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) SYTL has failed to fulfil any obligation, for which failure termination has been specified in the SYTL Concession Agreement; or

w) SYTL commits a default in complying with any other provision of the SYTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the SYTL Concession Agreement, upon the occurrence of an SYTL Default, the NHAI shall be entitled to terminate the SYTL Concession Agreement by issuing a termination notice to SYTL. Before issuing the termination notice, the NHAI shall, by notice, inform SYTL of its intention to issue a termination notice and grant 15 days to SYTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the SYTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 15 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute SYTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of SYTL. On a written request from the lenders' representative and SYTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by SYTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the SYTL Concession Agreement, the NHAI shall be deemed to be in default of the SYTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the SYTL Concession Agreement by SYTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the SYTL Concession Agreement and such default has a material adverse effect on SYTL;

b) the NHAI has failed to make any payment to SYTL within the period specified in the SYTL Concession Agreement;

c) the NHAI repudiates the SYTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the SYTL Concession Agreement; or

d) the State of Maharashtra commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on SYTL and the breach continues for a period of 90 days from the date of notice given in this behalf by SYTL to the NHAI.

Without prejudice to any other rights or remedies which SYTL may have under the SYTL Concession Agreement, upon the occurrence of an NHAI Default, SYTL shall be entitled to terminate the SYTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, SYTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of an SYTL Default during the operation period, the NHAI shall pay to SYTL, by way of termination payment, an amount equal to 90% of the SYTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of SYTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to SYTL, by way of termination payment, an amount equal to:

a) SYTL Debt Due; and
b) 150% of the adjusted equity.

Termination payment shall become due and payable to SYTL within 15 days of a demand being made by SYTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the SYTL Concession Agreement shall constitute a full and final settlement of all claims of SYTL on account of termination of the SYTL Concession Agreement for any reason whatsoever and SYTL, or any shareholder thereof, shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

SYTL shall be responsible for all defects and deficiencies in the SYTL Project Highway for a period of 120 days after termination. SYTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the SYTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the SYTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

7.1. Supplementary Agreement between SYTL and the NHAI dated April 12, 2018

SYTL has entered into a supplementary agreement (the "**Supplementary Agreement**") to amend the concession agreement dated March 3, 2014 (the "**Concession Agreement**") to provide for the installation of a new electronic toll collection system (the "**Hybrid ETC System**") for electronic payment of user fee using RFID tags or any other such device.

Change of Scope

The NHAI shall provide a change in the scope of work order at prices discovered by the NHAI to SYTL to provide for, as per the defined technical specifications, installation, testing, commissioning, operations and maintenance of the Hybrid ETC System in all lanes of the toll plaza. SYTL shall ensure that the requisite civil work is completed prior to the installation, integration, testing and commissioning of the Hybrid ETC System. It shall also ensure the smooth flow of traffic during installation, integration, testing and commissioning of the Hybrid ETC System. SYTL will have no claim against the NHAI on account of any lane closure, if any, on account of any third party claims.

Scope of Work

SYTL shall install, integrate, test, commission, operate and maintain the Hybrid ETC System in all the lanes of the toll plazas. The Hybrid ETC System shall be installed, commissioned, operated and maintained for a period of five years or the end of the Concession Agreement, whichever is earlier, beyond which it will be replaced or renewed, as the case may be, by SYTL or the NHAI, at the cost of the NHAI. The cycle shall be maintained till the end of the concession period in accordance with the Concession Agreement.

The provisions of the Concession Agreement relating to change of scope shall not apply to the Supplementary Agreement.

Any permission required by SYTL under the applicable laws for the installation of the Hybrid ETC System shall be procured and maintained by SYTL. The NHAI shall provide reasonable assistance in this regard.

Timeline

SYTL shall complete all responsibilities, obligations and works as described in the Supplementary Agreement within a period of 120 days from the date of signing the Supplementary Agreement.

Damages for Delay

In case of delay in installation, testing, or commissioning of the Hybrid ETC System at the toll plazas as per the time schedule prescribed on account of reasons attributable to SYTL, damages at 0.1% of the cost of installation, testing, or commissioning of the Hybrid ETC System for each day of the delay, subject to a maximum of 10% of the cost of installation, testing, or commissioning of the Hybrid ETC System shall be levied on SYTL. Damages for delay will not be applicable in case of a delay in implementation due to delayed payment release by the NHAI.

SYTL shall not be entitled to any additional benefit either in monetary terms or on any other account including, but not limited to any extension of time, save on account of and NHAI Default or force majeure.

Compensation

In case of any damage to the Hybrid ETC System due to any act or omission of SYTL, the NHAI shall not be liable for any compensation to SYTL, and SYTL shall bear the cost of repair, replacement or renewal of the damaged Hybrid ETC System equipment or hardware itself.

In case of any damage to the Hybrid ETC System due to the occurrence of any force majeure event, the compensation to SYTL shall be derived as per the provisions of the Concession Agreement.

End of the Concession Period

SYTL shall hand over all the Hybrid ETC equipment or hardware in an operational condition to the NHAI or a third party as directed by the NHAI at the end of the concession period, beyond which no O&M payment shall be made to SYTL. If any Hybrid ETC System equipment or hardware is found to be non-operational, then SYTL shall be liable to replace or pay for the replacement of the Hybrid ETC System equipment or hardware required to make the Hybrid ETC System operational on all lanes of the toll plazas to the NHAI promptly.

Upon termination, SYTL shall assign warranties received from the original equipment manufacturer and for the components or equipment, and provide the respective warranty assignment agreements and necessary documents. SYTL shall ensure that all the warranties are duly assigned in favor of the NHAI and SYTL shall bear the cost and expenses towards the assignment.

8. Concession Agreement between UTL and the NHAI dated December 9, 2016, as amended

UTL has entered into a concession agreement for six-laning of NH-8 in Rajasthan and Gujarat from km 287.400 to km 401.200 (approx. length 113.800 km) on design, build, finance, operate and transfer ("D**BFOT**") basis (the "**UTL Concession Agreement**"), for a period of 21 years, from September 3, 2017 ("**UTL Appointed Date**") or until such date on which the UTL Concession Agreement is terminated by a termination notice ("**UTL Termination Date**", and the period between the UTL Appointed Date and the UTL Termination Date, the "**UTL Concession Period**").

Certain Definitions

"**UTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the UTL Debt Due is convertible into equity at the option of the senior lenders and/or UTL, it shall, for the purposes of the UTL Concession Agreement, be deemed to be UTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**UTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**UTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of UTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the UTL Project Highway (as defined below), but does not include additional facilities;

"**UTL Project Highway**" shall mean the site comprising the existing road comprising NH-8 from km 287.400 to km 401.200 and all UTL Project Assets, and its subsequent development and augmentation in accordance with the UTL Concession Agreement;

"**UTL Project**" shall mean the construction, operation, and maintenance of the UTL Project Highway in accordance with the provisions of the UTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project;

"**Premium**" shall mean an amount paid to the NHAI by UTL in the form of an additional concession fee, as set forth in the bid for each year of the UTL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the UTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to UTL, and UTL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the UTL Concession Agreement, to construct, operate and maintain the UTL Project for a period of 21 years from the UTL Appointed Date.

Subject to, and in accordance with the provisions of the UTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, UTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the UTL Concession Agreement;

b) finance and construct the UTL Project Highway;

c) manage, operate, and maintain the UTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the UTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of UTL's obligations under and in accordance with the UTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of UTL under the UTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the UTL Concession Agreement, or the concession granted, or on the whole or any part of the UTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the UTL Concession Agreement or the agreement for the substitution of UTL entered into by UTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, UTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the UTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, UTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the UTL Concession Agreement, UTL shall not collect any fees in relation to exempted vehicles.

UTL shall not collect any fee from a local user for non-commercial use of the UTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the UTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, UTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, UTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the UTL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, UTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, UTL was required to pay to the NHAI, immediately after the third anniversary year of the COD, a Premium in the form of an additional concession fee equal to ₹1,638,000,000 as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the UTL

Concession Period, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 8% as compared to the immediately preceding year. The Premium is deemed to be a part of the concession fee.

The concession fee payable under the provisions of the UTL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

UTL was required to, prior to the UTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the UTL Concession Agreement read with the escrow agreement entered into amongst UTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

UTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the UTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

UTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by UTL for and in respect of the UTL Project Highway;

b) all payments relating to construction of the UTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the UTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of UTL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by UTL, including repayment of revenue shortfall loan. UTL has agreed to give irrevocable instructions to the Escrow Bank to make payments from the Escrow Account in accordance with the instructions of the NHAI under the UTL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of UTL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of UTL.

UTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the UTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by UTL for and in respect of the UTL Project Highway;

b) 90% of the UTL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by UTL, including the repayment of the revenue shortfall loan. UTL has agreed to give irrevocable instruction to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the UTL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the UTL Concession Agreement;

f) outstanding UTL Debt Service including balance of UTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the UTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of UTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the UTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the UTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the UTL Concession Agreement and the costs thereof shall be expended by UTL and reimbursed by the NHAI.

If UTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the UTL Concession Agreement, or inform UTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of UTL being in material default or breach of the UTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the UTL Concession Agreement.

In the event of the NHAI being in material default of the UTL Concession Agreement at any time after the UTL Appointed Date, it shall pay to UTL by way of compensation, all direct costs suffered or incurred by UTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the UTL Concession Agreement.

In the event that a material default or breach of the UTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the UTL Concession Period as provided in the UTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the UTL Concession Agreement, the NHAI shall pay to UTL, for each day of the breach, compensation as provided in the UTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the UTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the UTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the UTL Concession Period shall, subject to payment of concession fee in accordance with the UTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in UTL Concession Period shall not in any case exceed 20% (twenty percent) of the UTL Concession Period.

Subject to the provisions of the UTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the UTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in UTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in UTL Concession Period under the UTL Concession Agreement, UTL may elect to pay, in addition to the concession fee that would be due and payable if the UTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by UTL no later than two years prior to the UTL Termination Date contemplated by the UTL Concession Agreement, NHAI shall waive the reduction in UTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in UTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the UTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the UTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The UTL Concession Period, may be extended so that it yields for UTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the UTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to UTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by UTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this UTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the UTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the UTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the UTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and UTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, UTL shall be deemed to be in default of the UTL Concession Agreement ("**UTL Default**"), unless the default has occurred solely as a result of any breach of the UTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the UTL Concession Agreement and UTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the UTL Concession Agreement, UTL fails to cure, within a cure period of 90 days, the UTL Default for which whole or part of the performance security was appropriated;

c) UTL does not achieve the latest outstanding project milestone due in accordance with the UTL Concession Agreement and continues to be in default for 90 days;

d) UTL abandons or manifests intention to abandon the construction or operation of the UTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the UTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the UTL Concession Agreement;

g) UTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) UTL has failed to make any payment to the NHAI within the period specified in the UTL Concession Agreement;

i) an escrow default has occurred and UTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and UTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by UTL has caused a material adverse effect;

l) UTL creates an encumbrance in breach of the UTL Concession Agreement;

m) UTL repudiates the UTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the UTL Concession Agreement;

n) a change in ownership has occurred in breach of the UTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of UTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of UTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of UTL has caused a material adverse effect;

q) UTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for UTL or for the whole or material part of its assets that has a material bearing on the UTL Project;

r) UTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of UTL is passed, or any petition for winding up of UTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or UTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of UTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of UTL under the UTL Concession Agreement and the project agreements; provided that:

    i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the UTL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the UTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of UTL as at the UTL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of UTL which is, as of the date hereof, found to be materially false, incorrect or misleading or UTL is at any time hereafter found to be in breach thereof;

u) UTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) UTL has failed to fulfil any obligation, for which failure termination has been specified in the UTL Concession Agreement; or

w) UTL commits a default in complying with any other provision of the UTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the UTL Concession Agreement, upon the occurrence of a UTL Default, the NHAI shall be entitled to terminate the UTL Concession Agreement by issuing a termination notice to UTL. Before issuing the termination notice, the NHAI shall, by notice, inform UTL of its intention to issue a termination notice and grant 15 days to UTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the UTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute UTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of UTL. On a written request from the lenders' representative and UTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by UTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the UTL Concession Agreement, the NHAI shall be deemed to be in default of the UTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the UTL Concession Agreement by UTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the UTL Concession Agreement and such default has a material adverse effect on UTL;

b) the NHAI has failed to make any payment to UTL within the period specified in the UTL Concession Agreement;

c) the NHAI repudiates the UTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the UTL Concession Agreement; or

d) the State of Rajasthan or Gujarat commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on UTL and the breach continues for a period of 90 days from the date of notice given in this behalf by UTL to the NHAI.

Without prejudice to any other rights or remedies which UTL may have under the UTL Concession Agreement, upon the occurrence of an NHAI Default, UTL shall be entitled to terminate the UTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, UTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a UTL Default during the operation period, the NHAI shall pay to UTL, by way of termination payment, an amount equal to 90% of the UTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of UTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to UTL, by way of termination payment, an amount equal to:

a) UTL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to UTL within 30 days of a demand being made by UTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the UTL Concession Agreement shall constitute a full and final settlement of all claims of UTL on account of termination of the UTL Concession Agreement for any reason whatsoever and UTL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

UTL shall be responsible for all defects and deficiencies in the UTL Project Highway for a period of 120 days after termination. UTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the UTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the UTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

9. Concession Agreement between YATL and the NHAI dated May 30, 2014

YATL has entered into a concession agreement for four-laning of Yedeshi-Aurangabad section of NH-211 in Maharashtra from km 100.000 to km 290.200 on design, build, finance, operate and transfer ("**DBFOT**") basis (the "**YATL Concession Agreement**"), for a period of 26 years, from July 1, 2015 ("**YATL Appointed Date**") or until such date on which the YATL Concession Agreement is terminated by a termination notice ("**YATL Termination Date**", and the period between the YATL Appointed Date and the YATL Termination Date, the "**YATL Concession Period**").

Certain Definitions

"**YATL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the YATL Debt Due is convertible into equity at the option of the senior lenders and/or YATL, it shall, for the purposes of the YATL Concession Agreement, be deemed to be YATL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**YATL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**YATL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of YATL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the YATL Project Highway (as defined below), but does not include additional facilities;

"**YATL Project Highway**" shall mean the site comprising the existing road comprising NH-211 from km 100.000 to km 290.200 and all YATL Project Assets, and its subsequent development and augmentation in accordance with the YATL Concession Agreement;

"**YATL Project**" shall mean the construction, operation, and maintenance of the YATL Project Highway in accordance with the provisions of the YATL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Grant**" shall mean the cash support provided to YATL by the NHAI which is equal to the sum set forth in the bid.

Grant of Concession

Subject to, and in accordance with the provisions set out in the YATL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to YATL, and YATL has accepted the concession, including the exclusive right, license, and authority to construct, operate and maintain the YATL Project for a period of 26 years from the YATL Appointed Date.

Subject to, and in accordance with the provisions of the YATL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, YATL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the YATL Concession Agreement;

b) finance and construct the YATL Project Highway;

c) manage, operate, and maintain the YATL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and users liable for payment of fee for using the YATL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of YATL's obligations under and in accordance with the YATL Concession Agreement;
f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of YATL under the YATL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the YATL Concession Agreement, or the concession granted, or on the whole or any part of the YATL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the YATL Concession Agreement or the agreement for the substitution of YATL entered into by YATL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, YATL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the YATL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, YATL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the YATL Concession Agreement, YATL shall not collect any fees in relation to exempted vehicles.

YATL shall not collect any fee from a local user for non-commercial use of the YATL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the YATL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, YATL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, YATL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the YATL Project Highway and does not cross a toll plaza.

Grant

The NHAI has agreed to pay to YATL cash support by way of an outright grant equal to ₹5,580 million as set out in the bid. The grant shall be disbursed to YATL by way of equity support. It shall be credited to the Escrow Account (as defined below) and shall be applied by YATL for meeting the total project cost. The equity support shall not exceed the sum specified, but shall in no case be greater than twice the equity, and shall be further restricted to a sum not exceeding 40% of the total project cost.

The equity support shall be due and payable to YATL after it has expended the equity, and shall be disbursed proportionately along with the loan funds thereafter remaining to be disbursed by the senior lenders under the financing agreements. The NHAI shall disburse each tranche of the equity support as and when due, but no later than 15 days of receiving a request from YATL along with necessary particulars. In the event of the occurrence of a YATL Default (as defined below), disbursement of equity support shall be suspended till the YATL Default has been cured.

Concession Fee

In consideration of the grant of concession, YATL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Escrow Account

YATL was required to, prior to the YATL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the YATL Concession Agreement read with the escrow agreement entered into amongst YATL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

YATL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the YATL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

YATL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by YATL for and in respect of the YATL Project Highway;

b) all payments relating to construction of the YATL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the YATL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of YATL Debt Service due in an accounting year;

g) all payments and damages certified by the NHAI as due and payable to it by YATL, including repayment of revenue shortfall loan.

h) monthly proportionate provision of YATL Debt Service payments due in an accounting year in respect of subordinated debt;

i) any reserve requirements set forth in the financing agreements; and

j) balance, if any, in accordance with the instructions of YATL.

YATL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the YATL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by YATL for and in respect of the YATL Project Highway;

b) 90% of the YATL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by YATL, including the repayment of the revenue shortfall loan.

e) retention and payments relating to the liability for defects and deficiencies set forth in the YATL Concession Agreement;

f) outstanding YATL Debt Service including balance of YATL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the YATL Concession Agreement; and

j) balance, if any, in accordance with the instructions of YATL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the YATL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the YATL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the YATL Concession Agreement and the costs thereof shall be expended by YATL and reimbursed by the NHAI.

If YATL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 15 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the YATL Concession Agreement, or inform YATL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of YATL being in material default or breach of the YATL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the YATL Concession Agreement.

In the event of the NHAI being in material default of the YATL Concession Agreement at any time after the YATL Appointed Date, it shall pay to YATL by way of compensation, all direct costs suffered or incurred by YATL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the YATL Concession Agreement.

In the event that a material default or breach of the YATL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the YATL Concession Period as provided in the YATL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the YATL Concession Agreement, the NHAI shall pay to YATL, for each day of the breach, compensation as provided in the YATL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the YATL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the YATL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the YATL Concession Period shall, subject to payment of concession fee in accordance with the YATL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in YATL Concession Period shall not in any case exceed 20% (twenty percent) of the YATL Concession Period.

Subject to the provisions of the YATL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the YATL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in YATL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in YATL Concession Period under the YATL Concession Agreement, YATL may elect to pay, in addition to the concession fee that would be due and payable if the YATL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by YATL no later than two years prior to the YATL Termination Date contemplated by the YATL Concession Agreement, NHAI shall waive the reduction in YATL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in YATL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the YATL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the YATL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The YATL Concession Period, may be extended so that it yields for YATL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the YATL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to YATL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by YATL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this YATL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the YATL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the YATL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the YATL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and YATL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, YATL shall be deemed to be in default of the YATL Concession Agreement ("**YATL Default**"), unless the default has occurred solely as a result of any breach of the YATL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the YATL Concession Agreement and YATL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the YATL Concession Agreement, YATL fails to cure, within a cure period of 90 days, the YATL Default for which whole or part of the performance security was appropriated;

c) YATL does not achieve the latest outstanding project milestone due in accordance with the YATL Concession Agreement and continues to be in default for 120 days;

d) YATL abandons or manifests intention to abandon the construction or operation of the YATL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the YATL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the YATL Concession Agreement;

g) YATL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) YATL has failed to make any payment to the NHAI within the period specified in the YATL Concession Agreement;

i) an escrow default has occurred and YATL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and YATL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by YATL has caused a material adverse effect;

l) YATL creates an encumbrance in breach of the YATL Concession Agreement;

m) YATL repudiates the YATL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the YATL Concession Agreement;

n) a change in ownership has occurred in breach of the YATL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of YATL under any of the project agreements, or of (ii) all or part of the assets or undertaking of YATL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of YATL has caused a material adverse effect;

q) YATL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for YATL or for the whole or material part of its assets that has a material bearing on the YATL Project;

r) YATL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of YATL is passed, or any petition for winding up of YATL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or YATL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of YATL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of YATL under the YATL Concession Agreement and the project agreements; provided that:

    i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the YATL Concession Agreement and the project agreements;

    ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the YATL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of YATL as at the YATL Appointed Date; and

    iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of YATL which is, as of the date hereof, found to be materially false, incorrect or misleading or YATL is at any time hereafter found to be in breach thereof;

u) YATL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) YATL has failed to fulfil any obligation, for which failure termination has been specified in the YATL Concession Agreement; or

w) YATL commits a default in complying with any other provision of the YATL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the YATL Concession Agreement, upon the occurrence of a YATL Default, the NHAI shall be entitled to terminate the YATL Concession Agreement by issuing a termination notice to YATL. Before issuing the termination notice, the NHAI shall, by notice, inform YATL of its intention to issue a termination notice and grant 15 days to YATL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the YATL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 15 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute YATL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of YATL. On a written request from the lenders' representative and YATL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by YATL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the YATL Concession Agreement, the NHAI shall be deemed to be in default of the YATL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the YATL Concession Agreement by YATL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the YATL Concession Agreement and such default has a material adverse effect on YATL;

b) the NHAI has failed to make any payment to YATL within the period specified in the YATL Concession Agreement;

c) the NHAI repudiates the YATL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the YATL Concession Agreement; or

d) the State of Maharashtra commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on YATL and the breach continues for a period of 90 days from the date of notice given in this behalf by YATL to the NHAI.

Without prejudice to any other rights or remedies which YATL may have under the YATL Concession Agreement, upon the occurrence of an NHAI Default, YATL shall be entitled to terminate the YATL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, YATL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a YATL Default during the operation period, the NHAI shall pay to YATL, by way of termination payment, an amount equal to 90% of the YATL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of YATL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to YATL, by way of termination payment, an amount equal to:

a) YATL Debt Due; and
b) 150% of the adjusted equity.

Termination payment shall become due and payable to YATL within 15 days of a demand being made by YATL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the YATL Concession Agreement shall constitute a full and final settlement of all claims of YATL on account of termination of the YATL Concession Agreement for any reason whatsoever and YATL, or any shareholder thereof, shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

YATL shall be responsible for all defects and deficiencies in the YATL Project Highway for a period of 120 days after termination. YATL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the YATL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the YATL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

10. Concession Agreement between PDTPL and the NHAI dated June 14, 2021

PDTPL has entered into a concession agreement for the six-laning of National Corridor NH-19 from Palsit to Dankuni (upto NH-6 Connector) from KM 588.870 to KM 652.700 (total design length 63.830 km) in the State of West Bengal under Bharatmala Pariyojana to be executed on BOT (Toll) basis (the "**PDTPL Concession Agreement**"), for a period of 17 years, from April 2, 2022 ("**PDTPL Appointed Date**") or until such date on which the PDTPL Concession Agreement is terminated by a termination notice ("**PDTPL Termination Date**", and the period between the PDTPL Appointed Date and the PDTPL Termination Date, the "**PDTPL Concession Period**").

Certain Definitions

"**PDTPL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the PDTPL Debt Due is convertible into equity at the option of the senior lenders and/or PDTPL, it shall, for the purposes of the PDTPL Concession Agreement, be deemed to be PDTPL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**PDTPL Debt Service**" shall mean the sum of all payments on account of principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**PDTPL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of PDTPL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the PDTPL Project Highway (as defined below), but does not include additional facilities;

"**PDTPL Project Highway**" shall mean the site comprising the existing road comprising NH-19 from km 588.870 to km 652.700 and all PDTPL Project Assets, and its subsequent development and augmentation in accordance with the PDTPL Concession Agreement;

"**PDTPL Project**" shall mean the construction, operation, and maintenance of the PDTPL Project Highway in accordance with the provisions of the PDTPL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Premium**" shall mean an amount payable to the NHAI by PDTPL in the form of an additional concession fee, as set forth in the bid for each year of the PDTPL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the PDTPL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to PDTPL, and PDTPL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the PDTPL Concession Agreement, to construct, operate and maintain the PDTPL Project for a period of 17 years from the PDTPL Appointed Date.

Subject to, and in accordance with the provisions of the PDTPL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, PDTPL to:

h) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the PDTPL Concession Agreement;

i) finance and construct the PDTPL Project Highway;

j) manage, operate, and maintain the PDTPL Project Highway and regulate the use thereof by third parties;

k) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the PDTPL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

l) perform and fulfil all of PDTPL's obligations under and in accordance with the PDTPL Concession Agreement;

m) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of PDTPL under the PDTPL Concession Agreement; and

n) neither assign, transfer or sublet, or create any lien or encumbrance on the PDTPL Concession Agreement, or the concession granted, or on the whole or any part of the PDTPL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the PDTPL Concession Agreement or the agreement for the substitution of PDTPL entered into by PDTPL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, PDTPL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the PDTPL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, PDTPL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the PDTPL Concession Agreement, PDTPL shall not collect any fees in relation to exempted vehicles.

PDTPL shall not collect any fee from a local user for non-commercial use of the PDTPL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the PDTPL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, PDTPL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, PDTPL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the PDTPL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, PDTPL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, immediately after the first anniversary of the project completion date, a premium in the form of an additional concession fee for every year of the remaining concession period is payable by PDTPL. The premium to be paid for the second year after the project completion date is equal to 10.8% of the realisable fee and is required to be paid by PDTPL as due to the NHAI during that year. For subsequent years, the premium will be determined based on the total realisable fee in the respective year at the percentage to be arrived at by increasing the percentage of premium in the respective year by an additional 1% as compared to the immediately preceding year.

The concession fee payable under the provisions of the PDTPL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

PDTPL was required to, prior to the PDTPL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the PDTPL Concession Agreement read with the escrow agreement entered into among PDTPL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

PDTPL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the PDTPL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and
c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

PDTPL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by PDTPL for and in respect of the PDTPL Project Highway;

b) all payments relating to construction of the PDTPL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) operation and management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the PDTPL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee and premium due and payable to the NHAI;

f) monthly proportionate provision of PDTPL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by PDTPL, including repayment of revenue shortfall loan. PDTPL has agreed to give irrevocable instructions to the Escrow Bank to make payments from the Escrow Account in accordance with the instructions of the NHAI under the PDTPL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of PDTPL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of PDTPL.

PDTPL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the PDTPL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by PDTPL for and in respect of the PDTPL Project Highway;

b) 90% of the PDTPL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by PDTPL, including the repayment of the revenue shortfall loan. PDTPL has agreed to give irrevocable instruction to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the PDTPL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the PDTPL Concession Agreement;

f) outstanding PDTPL Debt Service including balance of PDTPL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the PDTPL Concession Agreement; and

j) balance, if any, in accordance with the instructions of PDTPL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the PDTPL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the PDTPL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the PDTPL Concession Agreement and the costs thereof shall be expended by PDTPL and reimbursed by the NHAI in accordance with the PDTPL Concession Agreement.

If PDTPL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the PDTPL Concession Agreement, or inform PDTPL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of PDTPL being in material default or breach of the PDTPL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the PDTPL Concession Agreement.

In the event of the NHAI being in material default or breach of the PDTPL Concession Agreement at any time after the PDTPL Appointed Date, it shall pay to PDTPL by way of compensation, all direct costs suffered or incurred by PDTPL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the PDTPL Concession Agreement.

In the event that a material default or breach of the PDTPL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the PDTPL Concession Period as provided in the PDTPL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the PDTPL Concession Agreement, the NHAI shall pay to PDTPL, for each day of the breach, compensation as provided in the PDTPL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the PDTPL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the PDTPL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic by more than 5% (five percent), then for every 1% (one percent) shortfall as compared to the target traffic, the PDTPL Concession Period shall, subject to payment of concession fee and additional concession fee in accordance with the PDTPL Concession Agreement, be increased by 1% (one percent) thereof; provided that such increase in PDTPL Concession Period shall not in any case exceed 20% (twenty percent) of the PDTPL Concession Period.

Subject to the provisions of the PDTPL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic by more than 5% (five percent), then for every 1% (one percent) increase as compared to the target traffic, the PDTPL Concession Period shall be reduced by 1% (one percent) thereof; provided that such reduction in PDTPL Concession Period shall not in any case exceed 20% (twenty percent) of the PDTPL Concession Period.

Notwithstanding anything to the contrary contained in the PDTPL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the PDTPL Project Highway, an indirect political event under the PDTPL Concession Agreement will be deemed to have occurred and the NHAI may, at its discretion, terminate the PDTPL Concession Agreement. If PDTPL has completed the construction works necessary for augmenting the capacity of the PDTPL Project Highway such that its capacity has increased sufficiently for carrying the then current traffic in accordance with the corresponding provisions of the relevant Indian Roads Congress publication, prior to the issue of a termination notice by the NHAI, the indirect political event will deemed to have been cured.

Termination of the PDTPL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the PDTPL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and PDTPL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, PDTPL shall be deemed to be in default of the PDTPL Concession Agreement ("**PDTPL Default**"), unless the default has occurred solely as a result of any breach of the PDTPL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the PDTPL Concession Agreement and PDTPL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the PDTPL Concession Agreement, PDTPL fails to cure, within a cure period of 90 days, the PDTPL Default for which whole or part of the performance security was appropriated;

c) PDTPL does not achieve the latest outstanding project milestone due in accordance with the PDTPL Concession Agreement and continues to be in default for 90 days;

d) PDTPL abandons or manifests intention to abandon the construction or operation of the PDTPL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the PDTPL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the PDTPL Concession Agreement;

g) PDTPL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) PDTPL has failed to make any payment to the NHAI within the period specified in the PDTPL Concession Agreement;

i) an escrow default has occurred and PDTPL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and PDTPL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by PDTPL has caused a material adverse effect;

l) PDTPL creates an encumbrance in breach of the PDTPL Concession Agreement;

m) PDTPL repudiates the PDTPL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the PDTPL Concession Agreement;

n) a change in ownership has occurred in breach of the PDTPL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of PDTPL under any of the project agreements, or of (ii) all or part of the assets or undertaking of PDTPL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of PDTPL has caused a material adverse effect;

q) PDTPL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for PDTPL or for the whole or material part of its assets that has a material bearing on the PDTPL Project;

r) PDTPL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of PDTPL is passed, or any petition for winding up of PDTPL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or PDTPL is ordered to be wound up by a court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of PDTPL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of PDTPL under the PDTPL Concession Agreement and the project agreements; provided that:

    i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the PDTPL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the PDTPL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of PDTPL as at the PDTPL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of PDTPL which is, as of the date hereof, found to be materially false, incorrect or misleading or PDTPL is at any time hereafter found to be in breach thereof;

u) PDTPL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) PDTPL has failed to fulfil any obligation, for which failure termination has been specified in the PDTPL Concession Agreement; or

w) PDTPL commits a default in complying with any other provision of the PDTPL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the PDTPL Concession Agreement, upon the occurrence of a PDTPL Default, the NHAI shall be entitled to terminate the PDTPL Concession Agreement by issuing a termination notice to PDTPL. Before issuing the termination notice, the NHAI shall, by notice, inform PDTPL of its intention to issue a termination notice and grant 15 days to PDTPL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the PDTPL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute PDTPL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of PDTPL. On a written request from the lenders' representative and PDTPL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by PDTPL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the PDTPL Concession Agreement, the NHAI shall be deemed to be in default of the PDTPL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the PDTPL Concession Agreement by PDTPL, or due to force majeure. The default referred to herein shall include:

e) the NHAI commits a material default in complying with any of the provisions of the PDTPL Concession Agreement and such default has a material adverse effect on PDTPL;

f) the NHAI has failed to make any payment to PDTPL within the period specified in the PDTPL Concession Agreement;

g) the NHAI repudiates the PDTPL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the PDTPL Concession Agreement; or

h) the State of West Bengal commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on PDTPL and the breach continues for a period of 90 days from the date of notice given in this behalf by PDTPL to the NHAI.

Without prejudice to any other rights or remedies which PDTPL may have under the PDTPL Concession Agreement, upon the occurrence of an NHAI Default, PDTPL shall be entitled to terminate the PDTPL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, PDTPL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a PDTPL Default during the operation period, the NHAI shall pay to PDTPL, by way of termination payment, an amount equal to 90% of the PDTPL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of PDTPL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to PDTPL, by way of termination payment, an amount equal to:

a) PDTPL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to PDTPL within 30 days of a demand being made by PDTPL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the PDTPL Concession Agreement shall constitute a full and final settlement of all claims of PDTPL on account of termination of the PDTPL Concession Agreement for any reason whatsoever and PDTPL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

PDTPL shall be responsible for all defects and deficiencies in the PDTPL Project Highway for a period of 120 days after termination. PDTPL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the PDTPL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the PDTPL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

11. Concession Agreement among IRB GEPL, IRB, HMDA and HGCL dated May 26, 2023

IRB GEPL has entered into a concession agreement for development, operation, maintenance, and management of Nehru Outer Ring Road from km 0+000 to km 158+000, in Hyderabad, Telangana on toll operate transfer ("**TOT**") basis (the "**IRB GEPL Concession Agreement**"), for a period of 30 years, from August 12, 2023, the appointed date under the IRB GEPL Concession Agreement ("**IRB GEPL Appointed Date**") or until such date on which the IRB GEPL Concession Agreement is terminated by a termination notice ("**IRB GEPL Termination Date**", and the period between the IRB GEPL Appointed Date and the IRB GEPL Termination Date, the "**IRB GEPL Concession Period**").

Certain Definitions

"**IRB GEPL Debt**" shall mean the financial assistance provided by lenders in terms of the financial agreement, relevant financial package, towards meeting the debt component of the concession fee amount that is paid by IRB GEPL to HMDA in terms hereof.

"**IRB GEPL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) all rights of IRB GEPL under the project agreements; (d) security deposits (e) insurance proceeds; and (f) applicable permits and authorizations relating to or in respect of the IRB GEPL Project Road (as defined below) but does not include additional facilities;

"**IRB GEPL Project Road**" shall mean the site comprising the existing road comprising the following:

Stretch	State	Start (KM)	End (KM)	Length (KM)
Nehru Outer Ring Road	Telangana	0.000	158.010	158.010

and all IRB GEPL Project Assets, and its operation and maintenance subject to and in accordance with IRB GEPL Concession Agreement;

"**IRB GEPL Project**" shall mean the operation, and maintenance of the IRB GEPL Project Road in accordance with the provisions of the IRB GEPL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Substitution Agreement**" shall mean the agreement to be entered into between HMDA, IRB GEPL and the lenders in the form set in IRB GEPL Concession Agreement.

Grant of Concession

Subject to, and in accordance with the provisions set out in the IRB GEPL Concession Agreement, the applicable laws and the applicable permits, the HMDA has granted to IRB GEPL, and IRB GEPL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the IRB GEPL Concession Agreement, to collect and demand appropriate fee, operate, manage and maintain the IRB GEPL Project for a period of 30 years from the IRB GEPL Appointed Date.

Subject to, and in accordance with the provisions of the IRB GEPL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, IRB GEPL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the IRB GEPL Concession Agreement;

b) manage, operate, and maintain IRB GEPL Project Road and regulate the use thereof by third parties in accordance with the terms of the IRB GEPL Concession Agreement;

c) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the IRB GEPL Project Road or any part thereof and refuse entry of any vehicle if the fee due is not paid;

d) perform and fulfil all of IRB GEPL's obligations under and in accordance with the IRB GEPL Concession Agreement;

e) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of IRB GEPL under the IRB GEPL Concession Agreement; and

f) neither assign, transfer or sublet, or create any lien or encumbrance on IRB GEPL Concession Agreement, or the concession granted, or on the whole or any part of IRB GEPL Project Road, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the IRB GEPL Concession Agreement

Fees

On and from the IRB GEPL Appointed Date till the transfer date (as defined under the IRB GEPL Concession Agreement), IRB GEPL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the IRB GEPL Concession Agreement and the applicable rules and regulations, provided that IRB GEPL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the IRB GEPL Concession Agreement, IRB GEPL shall not collect any fees in relation to exempted vehicles.

IRB GEPL acknowledges and agrees that upon payment of fee, any user shall be entitled to use IRB GEPL Project Road and IRB GEPL shall not place, or cause to be placed, any restriction on such use, except to the extent specified in any applicable law, applicable permit or provisions of the IRB GEPL Concession Agreement.

Concession Fee

In consideration of the grant of concession, IRB GEPL has paid to the HMDA in accordance with terms of the IRB GEPL Concession Agreement and prior to the IRB GEPL Appointed Date, the lumpsum upfront concession fee of an amount equivalent to ₹73.80 billion.

Escrow Account

IRB GEPL is required to, prior to the IRB GEPL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the IRB GEPL Concession Agreement read with the escrow agreement entered into amongst IRB GEPL, the HMDA, the Escrow Bank and the lenders through the lenders' representative (the "**Escrow Agreement**").

IRB GEPL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the IRB GEPL Project Road, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the HMDA including, if any, in relation to the change of scope in the IRB GEPL Project Road.

Withdrawals during Concession Period

IRB GEPL is required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, inter alia, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by IRB GEPL for and in respect of the IRB GEPL Project Road;

b) all payments relating to construction of the IRB GEPL Project Road, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses;

d) O&M expenses and other costs and expenses incurred by the HMDA in accordance with the provisions of the IRB GEPL Concession Agreement, and certified by the HMDA as due and payable to it;

e) monthly proportionate provision of debt service payment due in an accounting year;

f) all payments and damages certified by the HMDA as due and payable to it by IRB GEPL,

g) balance, if any, in accordance with the instructions of IRB GEPL.

IRB GEPL shall not, in any manner, modify the order of payment specified except with prior written approval from the HMDA and the lenders.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the IRB GEPL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by IRB GEPL for and in respect of the IRB GEPL Project Road;

b) payment due to lenders;

c) all payments and damages certified by the HMDA as due and payable to it by IRB GEPL;

d) retention and payments relating to the liability for defects and deficiencies set forth in the IRB GEPL Concession Agreement;

e) incurred or accrued O&M expenses;

f) any other payments required to be made under the IRB GEPL Concession Agreement; and

g) balance, if any, in accordance with the instructions of IRB GEPL.

No appropriations shall be made until a vesting certificate has been issued by the HMDA.

Change of Scope

The HMDA and/or HGCL may, notwithstanding anything to the contrary contained in the IRB GEPL Concession Agreement, but subject to provisions on 'restriction on certain works' in the IRB GEPL Concession Agreement, require IRB GEPL to alterations/modifications in the scope of IRB GEPL Project. Any such change of scope shall be made in accordance with the provisions of the IRB GEPL Concession Agreement and the costs thereof shall be expended by IRB GEPL and reimbursed by the HMDA.

If IRB GEPL determines at any time that a change in scope is necessary, it shall, by notice in writing, require the HMDA to consider such change of scope. The HMDA and/or HGCL shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the IRB GEPL Concession Agreement, or inform IRB GEPL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of IRB GEPL being in material default or breach of the IRB GEPL Concession Agreement, it shall pay to the HMDA by way of compensation, all direct costs suffered or incurred by the HMDA as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the IRB GEPL Concession Agreement or for any consequential losses incurred by HMDA.

In the event of the HMDA being in material default of the IRB GEPL Concession Agreement at any time after the IRB GEPL Appointed Date, it shall pay to IRB GEPL by way of compensation, all direct costs suffered or incurred by IRB GEPL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the IRB GEPL Concession Agreement. Compensation payable may include O&M Expenses and all other costs directly attributable to such material breach or default but shall not include loss of fee revenues or debt repayment or other consequential losses. In the event that a material default or breach of the IRB GEPL Concession Agreement leads to suspension of, or reduction in collection of fee, as the case may be, the HMDA shall, in addition to the payment of compensation, extend the IRB GEPL Concession Period as provided in the IRB GEPL Concession Agreement

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Termination of the IRB GEPL Concession Agreement

Termination by the HMDA

Save as otherwise provided in the IRB GEPL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and IRB GEPL fails to cure the default within the specified cure period, or where no cure period is specified, then within a cure period of 60 days, IRB GEPL shall be deemed to be in default of the

IRB GEPL Concession Agreement ("**IRB GEPL Default**"), unless the default has occurred solely as a result of any breach of the IRB GEPL Concession Agreement by the HMDA and/or HGCL or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the IRB GEPL Concession Agreement and IRB GEPL fails to replenish or provide fresh performance security within a cure period of 15 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the IRB GEPL Concession Agreement, IRB GEPL fails to cure, within a cure period of 60 days, the IRB GEPL Default for which whole or part of the performance security was appropriated;

c) IRB GEPL abandons or manifests intention to abandon the operation and maintenance of IRB GEPL Project Road/additional facilities without the prior written consent of HMDA

d) IRB GEPL fails/omits to facilitate HMDA and / or HGCL during construction/development of the additional facilities in terms IRB GEPL Concession Agreement;

e) IRB GEPL fails to roll over, renew and furnish new bank guarantee performance security subject to and in accordance with IRB GEPL Concession Agreement, at least three months prior to expiry of subsisting bank guarantee;

f) IRB GEPL is in breach of the maintenance requirements or the safety requirements as the case may be;

g) IRB GEPL fails to do additional operations & maintenance in terms of IRB GEPL Concession Agreement;

h) IRB GEPL has failed to make any payment to the HMDA and/or HGCL within the period specified in the IRB GEPL Concession Agreement;

i) upon occurrence of a financial default, the lenders' representative has, by notice, required the HMDA to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and IRB GEPL fails to cure the default within the cure period specified hereinabove;

j) a breach of the project agreements by IRB GEPL has caused a material adverse effect;

k) IRB GEPL creates an encumbrance in breach of the IRB GEPL Concession Agreement;

l) IRB GEPL repudiates the IRB GEPL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the IRB GEPL Concession Agreement;

m) a change in ownership has occurred in breach of the IRB GEPL Concession Agreement;

n) there is a transfer, pursuant to law either of (i) the rights and/or obligations of IRB GEPL under any of the project agreements, or of (ii) all or part of the assets or undertaking of IRB GEPL, and such transfer causes a material adverse effect;

o) an execution levied on any of the assets of IRB GEPL has caused a material adverse effect;

p) IRB GEPL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for IRB GEPL or for the whole or material part of its assets that has a material bearing on the IRB GEPL Project;

q) IRB GEPL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the HMDA, a material adverse effect;

r) a resolution for winding up of IRB GEPL is passed, or any petition for winding up of IRB GEPL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or IRB GEPL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of IRB GEPL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of IRB GEPL under the IRB GEPL Concession Agreement and the project agreements; provided that:

i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the IRB GEPL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the IRB GEPL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of IRB GEPL as at the IRB GEPL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

s) any representation or warranty of IRB GEPL which is, as of the date of execution of the IRB GEPL Concession Agreement, found to be materially false, incorrect or misleading

t) IRB GEPL submits to the HMDA and/or HGCL any statement, notice or other document, in written or electronic form, which has a material effect on the HMDA's and/or HGCL's rights, obligations or interests and which is false in material particulars;

u) IRB GEPL has failed to fulfil any obligation, for which failure termination has been specified in the IRB GEPL Concession Agreement; or

v) IRB GEPL commits a default in complying with any other provision of the IRB GEPL Concession Agreement if such default causes a material adverse effect on the HMDA and/or HGCL.

w) an escrow default has occurred and IRB GEPL fails to cure the default within a cure period of 15 days;

Without prejudice to any other rights or remedies which the HMDA may have under the IRB GEPL Concession Agreement, upon the occurrence of an IRB GEPL Default, the HMDA shall be entitled to issue a notice of its intention to terminate the IRB GEPL Concession Agreement with a copy thereof to the lenders.

Immediately upon the issue by Authority of the notice of intention to terminate, the lenders shall have the right to nominate an entity to replace IRB GEPL and perform IRB GEPL's obligations hereunder (the "**Substitute Entity**"). IRB GEPL shall procure that lenders shall notify HMDA about whether they are exercising their right of substitution within 60 days of receipt of notice of intention to terminate, or the lenders' notice of Default (as defined in the Substitution Agreement). Any such Substitute Entity shall have the legal, financial and technical capability reasonably necessary to perform the obligations of IRB GEPL in accordance with the terms of IRB GEPL Concession Agreement. Any such Substitute Entity shall be nominated in accordance with the procedure as set out in the Substitution Agreement.

Termination by IRB GEPL

In the event that any of the defaults specified below shall have occurred, and the HMDA fails to cure the default within a cure period of 90 days or such longer period as provided in the IRB GEPL Concession Agreement, the HMDA shall be deemed to be in default of the IRB GEPL Concession Agreement ("**HMDA Default**"), unless the default has occurred as a result of a breach of the IRB GEPL Concession Agreement by IRB GEPL, or due to force majeure. The default referred to herein shall include:

a) the HMDA commits a material default in complying with any of the provisions of the IRB GEPL Concession Agreement and such default has a material adverse effect on IRB GEPL;

b) the HMDA repudiates the IRB GEPL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the IRB GEPL Concession Agreement; or

c) the State commits a material default in complying with the provisions of the state's letter of comfort, if such default has a material adverse effect on IRB GEPL and the breach continues for a period of 90 days from the date of notice given in this behalf by IRB GEPL to the HMDA.

Without prejudice to any other rights or remedies which IRB GEPL may have under the IRB GEPL Concession Agreement, upon the occurrence of an HMDA Default, IRB GEPL shall be entitled to terminate the IRB GEPL

Concession Agreement by issuing a termination notice to the HMDA. Before issuing the termination notice, IRB GEPL shall, by notice, inform the HMDA of its intention to issue a termination notice and grant 15 days to the HMDA to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of an IRB GEPL Default during the IRB GEPL Concession Period, the performance security shall be forfeited and IRB GEPL would continue to be liable towards any antecedent liability, all obligations accrued before the effective date of the termination and also for the obligations including divestment requirements that must be fulfilled in terms hereof after termination. In addition to this, HMDA shall pay to IRB GEPL 70% of the unexpired cash flow.

Upon termination on account of an HMDA Default, the HMDA shall pay to IRB GEPL, by way of termination payment, an amount equal to 105% of the unexpired cash flow.

IRB GEPL shall be entitled to receive termination payment only upon furnishing to HMDA no objection certificate issued by lenders/lenders' representative recording/effecting release; vacation/discharge of the charge on IRB GEPL Project receivables (if any) created by IRB GEPL for securing repayment of IRB GEPL Debt.

Without prejudice to the respective rights or remedy of the HMDA and IRB GEPL, the termination payment shall become due and payable to IRB GEPL within 15 days of a demand being made by IRB GEPL to the HMDA with the necessary particulars, and in the event of any delay, the HMDA shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the IRB GEPL Concession Agreement shall constitute a full and final settlement of all claims of IRB GEPL on account of termination of the IRB GEPL Concession Agreement for any reason whatsoever and IRB GEPL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

IRB GEPL shall be responsible for all defects and deficiencies in the IRB GEPL Project Road for a period of 60 days after termination. IRB GEPL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the IRB GEPL Project Road as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the HMDA and/or HGCLin this behalf. A sum equal to the performance security shall be retained in the Escrow Account for a period of 90 days after termination for meeting the liabilities, if any, arising out of, or in connection with the provisions governing 'defects liability after termination' in the IRB GEPL Concession Agreement.

12. Concession Agreement between STPL and the NHAI dated May 12, 2023

STPL has entered into a concession agreement in respect of the upgradation to six lane with paved shoulder of NH-27 from Samakhiyali to Santalpur section from KM 339+200 to KM 430+100 in the state of Gujarat to be executed on a design, build, finance, operate and transfer basis (the "**STPL Concession Agreement**"), for a period of 20 years, from December 28, 2023 ("**STPL Appointed Date**") or until such date on which the STPL Concession Agreement is terminated by a termination notice ("**STPL Termination Date**", and the period between the STPL Appointed Date and the STPL Termination Date, the "**STPL Concession Period**").

Certain Definitions

"**STPL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principal**") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the STPL Debt Due is convertible into equity at the option of the senior lenders and/or STPL, it shall, for the purposes of the STPL Concession Agreement, be deemed to be STPL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**STPL Debt Service**" shall mean the sum of all payments on account of principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**STPL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of STPL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the STPL Project Highway (as defined below), but does not include additional facilities;

"**STPL Project Highway**" shall mean the site comprising the existing road comprising NH-27 from 339+200 to 430+100 and all STPL Project Assets, and its subsequent development and augmentation in accordance with the STPL Concession Agreement;

"**STPL Project**" shall mean the construction, operation, and maintenance of the STPL Project Highway in accordance with the provisions of the STPL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Premium**" shall mean an amount payable to the NHAI by STPL in the form of an additional concession fee, as set forth in the bid for each year of the STPL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the STPL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to STPL, and STPL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the STPL Concession Agreement, to construct, operate and maintain the STPL Project for a period of 20 years from the STPL Appointed Date.

Subject to, and in accordance with the provisions of the STPL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, STPL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the STPL Concession Agreement;

b) finance and construct the STPL Project Highway;

c) manage, operate, and maintain the STPL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the STPL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of STPL's obligations under and in accordance with the STPL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of STPL under the STPL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the STPL Concession Agreement, or the concession granted, or on the whole or any part of the STPL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the STPL Concession Agreement or the agreement for the substitution of STPL entered into by STPL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, STPL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the STPL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, STPL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the STPL Concession Agreement, STPL shall not collect any fees in relation to exempted vehicles.

STPL shall not collect any fee from a local user for non-commercial use of the STPL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the STPL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, STPL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, STPL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the STPL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, STPL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, immediately after the first anniversary of the project completion date, a premium in the form of an additional concession fee for every year of the remaining concession period is payable by STPL. The premium to be paid for the second year after the project completion date is equal to 42.84% of the realisable fee and is required to be paid by STPL as due to the NHAI during that year. For subsequent years, the premium will be determined based on the total realisable fee in the respective year at the percentage to be arrived at by increasing the percentage of premium in the respective year by an additional 1% as compared to the immediately preceding year.

The concession fee payable under the provisions of the STPL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

STPL was required to, prior to the STPL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the STPL Concession Agreement read with the escrow agreement entered into among STPL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

STPL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the STPL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and
c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

STPL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by STPL for and in respect of the STPL Project Highway;

b) all payments relating to construction of the STPL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) operation and management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the STPL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee and premium due and payable to the NHAI;

f) monthly proportionate provision of STPL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by STPL, including repayment of revenue shortfall loan. STPL has agreed to give irrevocable instructions to the Escrow Bank to make payments from the Escrow Account in accordance with the instructions of the NHAI under the STPL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of STPL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of STPL.

STPL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the STPL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

k) all taxes due and payable by STPL for and in respect of the STPL Project Highway;

l) 90% of the STPL Debt Due excluding the subordinated debt;

m) outstanding concession fee;

n) all payments and damages certified by the NHAI as due and payable to it by STPL, including the repayment of the revenue shortfall loan. STPL has agreed to give irrevocable instruction to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the STPL Concession Agreement and debit the payment to O&M expenses.

o) retention and payments relating to the liability for defects and deficiencies set forth in the STPL Concession Agreement;

p) outstanding STPL Debt Service including balance of STPL Debt Due;

q) outstanding subordinated debt;

r) incurred or accrued O&M expenses;

s) any other payments required to be made under the STPL Concession Agreement; and

t) balance, if any, in accordance with the instructions of STPL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the STPL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the STPL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the STPL Concession Agreement and the costs thereof shall be expended by STPL and reimbursed by the NHAI in accordance with the STPL Concession Agreement.

If STPL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the STPL Concession Agreement, or inform STPL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of STPL being in material default or breach of the STPL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the STPL Concession Agreement.

In the event of the NHAI being in material default or breach of the STPL Concession Agreement at any time after the STPL Appointed Date, it shall pay to STPL by way of compensation, all direct costs suffered or incurred by STPL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the STPL Concession Agreement.

In the event that a material default or breach of the STPL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the STPL Concession Period as provided in the STPL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the STPL Concession Agreement, the NHAI shall pay to STPL, for each day of the breach, compensation as provided in the STPL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the STPL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the STPL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic by more than 5% (five percent), then for every 1% (one percent) shortfall as compared to the target traffic, the STPL Concession Period shall, subject to payment of concession fee and additional concession fee in accordance with the STPL Concession Agreement, be increased by 1% (one percent) thereof; provided that such increase in STPL Concession Period shall not in any case exceed 20% (twenty percent) of the STPL Concession Period.

Subject to the provisions of the STPL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic by more than 5% (five percent), then for every 1% (one percent) increase as compared to the target traffic, the STPL Concession Period shall be reduced by 1% (one percent) thereof; provided that such reduction in STPL Concession Period shall not in any case exceed 20% (twenty percent) of the STPL Concession Period.

Notwithstanding anything to the contrary contained in the STPL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the STPL Project Highway, an indirect political event under the STPL Concession Agreement will be deemed to have occurred and the NHAI may, at its discretion, terminate the STPL Concession Agreement. If STPL has completed the construction works necessary for augmenting the capacity of the STPL Project Highway such that its capacity has increased sufficiently for carrying the then current traffic in accordance with the corresponding provisions of the relevant Indian Roads Congress publication, prior to the issue of a termination notice by the NHAI, the indirect political event will deemed to have been cured.

Termination of the STPL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the STPL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and STPL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, STPL shall be deemed to be in default of the STPL Concession Agreement ("**STPL Default**"), unless the default has occurred solely as a result of any breach of the STPL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the STPL Concession Agreement and STPL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the STPL Concession Agreement, STPL fails to cure, within a cure period of 90 days, the STPL Default for which whole or part of the performance security was appropriated;

c) STPL does not achieve the latest outstanding project milestone due in accordance with the STPL Concession Agreement and continues to be in default for 90 days;

d) STPL abandons or manifests intention to abandon the construction or operation of the STPL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the STPL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the STPL Concession Agreement;

g) STPL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) STPL has failed to make any payment to the NHAI within the period specified in the STPL Concession Agreement;

i) an escrow default has occurred and STPL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and STPL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by STPL has caused a material adverse effect;

l) STPL creates an encumbrance in breach of the STPL Concession Agreement;

m) STPL repudiates the STPL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the STPL Concession Agreement;

n) a change in ownership has occurred in breach of the STPL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of STPL under any of the project agreements, or of (ii) all or part of the assets or undertaking of STPL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of STPL has caused a material adverse effect;

q) STPL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for STPL or for the whole or material part of its assets that has a material bearing on the STPL Project;

r) STPL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of STPL is passed, or any petition for winding up of STPL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or STPL is ordered to be wound up by a court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of STPL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of STPL under the STPL Concession Agreement and the project agreements; provided that:

    iv) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the STPL Concession Agreement and the project agreements;

    v) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the STPL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of STPL as at the STPL Appointed Date; and

    vi) each of the project agreements remains in full force and effect;

t) any representation or warranty of STPL which is, as of the date hereof, found to be materially false, incorrect or misleading or STPL is at any time hereafter found to be in breach thereof;

u) STPL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) STPL has failed to fulfil any obligation, for which failure termination has been specified in the STPL Concession Agreement; or

w) STPL commits a default in complying with any other provision of the STPL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the STPL Concession Agreement, upon the occurrence of a STPL Default, the NHAI shall be entitled to terminate the STPL Concession Agreement by issuing a termination notice to STPL. Before issuing the termination notice, the NHAI shall, by notice, inform STPL of its intention to issue a termination notice and grant 15 days to STPL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the STPL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute STPL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of STPL. On a written request from the lenders' representative and STPL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by STPL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the STPL Concession Agreement, the NHAI shall be deemed to be in default of the STPL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the STPL Concession Agreement by STPL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the STPL Concession Agreement and such default has a material adverse effect on STPL;

b) the NHAI has failed to make any payment to STPL within the period specified in the STPL Concession Agreement;

c) the NHAI repudiates the STPL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the STPL Concession Agreement; or

d) the State commits a material default in complying with the provisions of the State Support Agreement if such default has a material adverse effect on STPL and the breach continues for a period of 90 days from the date of notice given in this behalf by STPL to the NHAI.

Without prejudice to any other rights or remedies which STPL may have under the STPL Concession Agreement, upon the occurrence of an NHAI Default, STPL shall be entitled to terminate the STPL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, STPL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a STPL Default during the operation period, the NHAI shall pay to STPL, by way of termination payment, an amount equal to 90% of the STPL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of STPL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to STPL, by way of termination payment, an amount equal to:

a) STPL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to STPL within 30 days of a demand being made by STPL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the STPL Concession Agreement shall constitute a full and final settlement of all claims of STPL on account of termination of the STPL Concession Agreement for any reason whatsoever and STPL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

STPL shall be responsible for all defects and deficiencies in the STPL Project Highway for a period of 120 days after termination. STPL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the STPL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the STPL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

13. Concession Agreement between IRB LTPL and the NHAI dated November 24, 2023

IRB LTPL has entered into a concession agreement in respect of the tolling, operation, management, maintenance and transfer of four lane Lalitpur-Sagar-Lakhnadon section of NH-26 (from Km 99.005 to Km 415.089) in Uttar Pradesh and Madhya Pradesh to be executed on a toll-operate-transfer basis (the "**IRB LTPL Concession Agreement**"), for a period of 20 years from the appointed date under the IRB LTPL Concession Agreement ("**IRB LTPL Appointed Date**") or until such date on which the IRB LTPL Concession Agreement is terminated by a termination notice ("**IRB LTPL Termination Date**", and the period between the IRB LTPL Appointed Date and the IRB LTPL Termination Date, the "**IRB LTPL Concession Period**").

Certain Definitions

"**IRB LTPL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) all rights of IRB LTPL under the project agreements; (d) financial assets, such as receivables, security deposits etc.; (e) insurance proceeds; and (f) applicable permits and authorizations relating to or in respect of the IRB LTPL Project Highway (as defined below), but does not include additional facilities;

"**IRB LTPL Project Highway**" shall mean the site comprising the following:

Stretch	State	Start (KM)	End (KM)	Length (KM)
Lalitpur-Sagar-Lakhnadon	Uttar Pradesh and Madhya Pradesh	99+005	415+089	316+084

and all IRB LTPL Project Assets, and its operation and maintenance in accordance with the IRB LTPL Concession Agreement;

"**IRB LTPL Project**" shall mean the operation and maintenance of the IRB LTPL Project Highway in accordance with the provisions of the IRB LTPL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

Grant of Concession

Subject to, and in accordance with the provisions set out in the IRB LTPL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to IRB LTPL, and IRB LTPL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the IRB LTPL Concession Agreement, to operate and maintain the IRB LTPL Project for a period of 20 years from the IRB LTPL Appointed Date.

Subject to, and in accordance with the provisions of the IRB LTPL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, IRB LTPL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the IRB LTPL Concession Agreement;

b) manage, operate, and maintain the IRB LTPL Project Highway and regulate the use thereof by third parties;

c) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the IRB LTPL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

d) perform and fulfil all of IRB LTPL's obligations under and in accordance with the IRB LTPL Concession Agreement;

e) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of IRB LTPL under the IRB LTPL Concession Agreement; and

f) neither assign, transfer or sublet, or create any lien or encumbrance on the IRB LTPL Concession Agreement, or the concession granted, or on the whole or any part of the IRB LTPL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the IRB LTPL Concession Agreement.

Fees

On and from the appointed date till the transfer date, IRB LTPL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the IRB LTPL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, IRB LTPL may determine and collect fee at such lower rates as it may, by public notice to the users or vehicles.

IRB LTPL shall not collect any fee from a local user for non-commercial use of the IRB LTPL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the IRB LTPL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, IRB LTPL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, IRB LTPL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the IRB LTPL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, IRB LTPL shall pay to the NHAI in accordance with terms of the IRB LTPL Concession Agreement and prior to the IRB LTPL Appointed Date, a lumpsum upfront concession fee of an amount equivalent to ₹44.28 billion.

Escrow Account

IRB LTPL was required to, prior to the IRB LTPL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the IRB LTPL Concession Agreement read with the escrow agreement entered into among IRB LTPL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

IRB LTPL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the IRB LTPL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and
c) all payments by the NHAI, including, if any, in relation to the change of scope.

Withdrawals during Concession Period

IRB LTPL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by IRB LTPL for and in respect of the IRB LTPL Project Highway;

b) all payments relating to construction of the IRB LTPL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) operation and management ("**O&M**") expenses;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the IRB LTPL Concession Agreement, and certified by the NHAI as due and payable to it;

e) monthly proportionate provision of IRB LTPL Debt Service due in an accounting year;

f) all payments and damages certified by the NHAI as due and payable to it by IRB LTPL; and

g) balance, if any, in accordance with the instructions of IRB LTPL.

IRB LTPL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI and the lenders.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the IRB LTPL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by IRB LTPL for and in respect of the IRB LTPL Project Highway;

b) payment due to lenders;

c) all payments and damages certified by the NHAI as due and payable to it by IRB LTPL;

d) retention and payments relating to the liability for defects and deficiencies set forth in the IRB LTPL Concession Agreement;

e) incurred or accrued O&M expenses;

f) any other payments required to be made under the IRB LTPL Concession Agreement; and

g) balance, if any, in accordance with the instructions of IRB LTPL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the IRB LTPL Concession Agreement, require IRB LTPL to make alterations or modifications in the scope of the project. Any such change of scope shall be made in accordance with the provisions of the IRB LTPL Concession Agreement and the costs thereof shall be expended by IRB LTPL and reimbursed by the NHAI in accordance with the IRB LTPL Concession Agreement.

If IRB LTPL determines at any time that a change in scope is necessary, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the IRB LTPL Concession Agreement, or inform IRB LTPL in writing of its reasons for not accepting such change of scope request.

Compensation for Breach of Agreement

In the event of IRB LTPL being in material default or breach of the IRB LTPL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the IRB LTPL Concession Agreement. Compensation payable may include operation and maintenance expenses and all other costs directly attributable to such material breach or default but does not include loss of fee revenues or debt repayment or other consequential losses

In the event of the NHAI being in material default or breach of the IRB LTPL Concession Agreement at any time after the IRB LTPL Appointed Date, it shall pay to IRB LTPL by way of compensation, all direct costs suffered or incurred by IRB LTPL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the IRB LTPL Concession Agreement.

In the event that a material default or breach of the IRB LTPL Concession Agreement leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the IRB LTPL Concession Period as provided in the IRB LTPL Concession Agreement. The payment of compensation by the NHAI shall be deemed to cure the breach of the IRB LTPL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Termination of the IRB LTPL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the IRB LTPL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and IRB LTPL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, IRB LTPL shall be deemed to be in default of the IRB LTPL Concession Agreement ("**IRB LTPL Default**"), unless the default has occurred solely as a result of any breach of the IRB LTPL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the IRB LTPL Concession Agreement and IRB LTPL fails to replenish or provide fresh performance security within a cure period of 15 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the IRB LTPL Concession Agreement, IRB LTPL fails to cure, within a cure period of 60 days, the IRB LTPL Default for which whole or part of the performance security was appropriated;

c) IRB LTPL abandons or manifests intention to abandon the operation and maintenance of the IRB LTPL Project Highway without the prior written consent of the NHAI;

d) IRB LTPL fails to roll over, renew and furnish new bank guarantee performance security subject to and in accordance with the IRB LTPL Concession Agreement, at least three months prior to expiry of subsisting bank guarantee;

e) IRB LTPL is in breach of the maintenance requirements or the safety requirements as the case may be;

f) IRB LTPL has failed to make any payment to the NHAI within the period specified in the IRB LTPL Concession Agreement;

g) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and IRB LTPL fails to cure the default within the cure period specified hereinabove;

h) a breach of the project agreements by IRB LTPL has caused a material adverse effect;

i) IRB LTPL creates an encumbrance in breach of the IRB LTPL Concession Agreement;

j) IRB LTPL repudiates the IRB LTPL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the IRB LTPL Concession Agreement;

k) a change in ownership has occurred in breach of the IRB LTPL Concession Agreement;

l) there is a transfer, pursuant to law either of (i) the rights and/or obligations of IRB LTPL under any of the project agreements, or of (ii) all or part of the assets or undertaking of IRB LTPL, and such transfer causes a material adverse effect;

m) an execution levied on any of the assets of IRB LTPL has caused a material adverse effect;

n) IRB LTPL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for IRB LTPL or for the whole or material part of its assets that has a material bearing on the IRB LTPL Project;

o) IRB LTPL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

p) a resolution for winding up of IRB LTPL is passed, or any petition for winding up of IRB LTPL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or IRB LTPL is ordered to be wound up by a court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of IRB LTPL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of IRB LTPL under the IRB LTPL Concession Agreement and the project agreements; provided that:

  i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the IRB LTPL Concession Agreement and the project agreements;

  ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the IRB LTPL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of IRB LTPL as at the IRB LTPL Appointed Date; and

  iii) each of the project agreements remains in full force and effect;

q) any representation or warranty of IRB LTPL which is, as of the date hereof, found to be materially false, incorrect or misleading or IRB LTPL is at any time hereafter found to be in breach thereof;

r) IRB LTPL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

s) IRB LTPL has failed to fulfil any obligation, for which failure termination has been specified in the IRB LTPL Concession Agreement; or

t) IRB LTPL commits a default in complying with any other provision of the IRB LTPL Concession Agreement if such default causes a material adverse effect on the NHAI.; or

u) an escrow default has occurred and IRB LTPL fails to cure the default within a cure period of 15 days.

Without prejudice to any other rights or remedies which the NHAI may have under the IRB LTPL Concession Agreement, upon the occurrence of a IRB LTPL Default, the NHAI shall be entitled to issue a notice of its intention to terminate the IRB LTPL Concession Agreement, with a copy therof to the lenders. Immediately upon the issue by the NHAI of the notice of intention to terminate, the lenders shall have the right to nominate an entity to replace IRB LTPL and perform IRB LTPL's obligations under the IRB LTPL Concession Agreement. IRB LTPL shall procure that lenders shall notify the NHAI about whether they are exercising their right of substitution within 60 days of receipt of notice of intention to terminate, or the lender's notice of default. Any such substitute entity shall have the legal, financial and technical capability reasonably necessary to perform the obligations of IRB LTPL in accordance with the procedure as set out in the Substitution Agreement.

Termination by IRB LTPL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the IRB LTPL Concession Agreement, the NHAI shall be deemed to be in default of the IRB LTPL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the IRB LTPL Concession Agreement by IRB LTPL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the IRB LTPL Concession Agreement and such default has a material adverse effect on IRB LTPL;

b) the NHAI repudiates the IRB LTPL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the IRB LTPL Concession Agreement; or

c) the State commits a material default in complying with the prvisions of the State Support Agreemenr if such default has a material adverse effect on IRB LTPL and the breach continues for a period of 90 days from the date of notice given in this behalf by IRB LTPL to the NHAI.

Without prejudice to any other rights or remedies which IRB LTPL may have under the IRB LTPL Concession Agreement, upon the occurrence of an NHAI Default, IRB LTPL shall be entitled to terminate the IRB LTPL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, IRB LTPL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of IRB LTPL Default during the operation period, the performance security shall be forfeited and IRB LTPL would continue to be liable towards any antecedent liability, all obligations accrued before the effective date of the termination and also the obligations including divestment requirements that must be fulfilled in terms hereof after termination. In the event of the NHAI terminating the IRB LTPL Concession Agreement on account of IRB LTPL Default and in addition to the NHAI forfeiting the performance security, the NHAI shall pay IRB LTPL 70% of the unexpired cash flow.

Upon termination on account of an NHAI Default, the NHAI shall pay to IRB LTPL, by way of termination payment, an amount equal to 105% of the unexpired cash flow.

Termination payment shall become due and payable to IRB LTPL within 15 days of a demand being made by IRB LTPL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the IRB LTPL Concession Agreement shall constitute a full and final settlement of all claims of IRB LTPL on account of termination of the IRB LTPL Concession Agreement for any reason whatsoever and IRB LTPL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

IRB LTPL shall be responsible for all defects and deficiencies in the IRB LTPL Project Highway for a period of 60 days after termination. IRB LTPL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the IRB LTPL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the IRB LTPL Concession Agreement shall be retained in the Escrow Account for a period of 90 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

14. Concession Agreement between IRB GTPL and the NHAI dated January 12, 2024

IRB GTPL has entered into a concession agreement in respect of the tolling, operation, management, maintenance and transfer of Gwalior Jhansi section from km 0.00 (revised km 16.00) to km 103.00 (revised km 98.455) in the State of Madhya Pradesh and Uttar Pradesh to be executed on a toll-operate-transfer basis (the "**IRB GTPL Concession Agreement**"), for a period of 20 years from the appointed date under the IRB GTPL Concession Agreement ("**IRB GTPL Appointed Date**") or until such date on which the IRB GTPL Concession Agreement is terminated by a termination notice ("**IRB GTPL Termination Date**", and the period between the IRB GTPL Appointed Date and the IRB GTPL Termination Date, the "**IRB GTPL Concession Period**").

Certain Definitions

"**IRB GTPL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) all rights of IRB IRB GTPL under the project agreements; (d) financial assets, such as receivables, security deposits etc.; (e) insurance proceeds; and (f) applicable permits and authorizations relating to or in respect of the IRB GTPL Project Highway (as defined below), but does not include additional facilities;

"**IRB GTPL Project Highway**" shall mean the site comprising the following:

Stretch	State	Start (KM)	End (KM)	Length (KM)
Gwalior Jhansi section	Madhya Pradesh and Uttar Pradesh	0.000 (revised 16.000)	103.000 (revised 98.455)	82.455

and all IRB GTPL Project Assets, and its operation and maintenance in accordance with the IRB GTPL Concession Agreement;

"**IRB GTPL Project**" shall mean the operation and maintenance of the IRB GTPL Project Highway in accordance with the provisions of the IRB GTPL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

Grant of Concession

Subject to, and in accordance with the provisions set out in the IRB GTPL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to IRB GTPL, and IRB GTPL have accepted the concession, including the exclusive right, license, and authority during the subsistence of the IRB GTPL Concession Agreement, to operate and maintain the IRB GTPL Project for a period of 20 years from the IRB GTPL Appointed Date.

Subject to, and in accordance with the provisions of the IRB GTPL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, IRB GTPL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the IRB GTPL Concession Agreement;

b) manage, operate, and maintain the IRB GTPL Project Highway and regulate the use thereof by third parties;

c) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the IRB GTPL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

d) perform and fulfil all of IRB GTPL's obligations under and in accordance with the IRB GTPL Concession Agreement;

e) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of IRB GTPL under the IRB GTPL Concession Agreement; and

f) neither assign, transfer or sublet, or create any lien or encumbrance on the IRB GTPL Concession Agreement, or the concession granted, or on the whole or any part of the IRB GTPL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the IRB GTPL Concession Agreement.

Fees

On and from the appointed date till the transfer date, IRB GTPL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the IRB GTPL Concession Agreement and the applicable rules and regulations. In accordance with the IRB GTPL Concession Agreement, IRB GTPL shall not collect any fees in relation to exempted vehicles.

IRB GTPL shall not collect any fee from a local user for non-commercial use of the IRB GTPL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the IRB GTPL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, IRB GTPL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, IRB GTPL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the IRB GTPL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, IRB GTPL shall pay to the NHAI in accordance with terms of the IRB GTPL Concession Agreement and prior to the IRB GTPL Appointed Date, a lumpsum upfront concession fee of an amount equivalent to ₹11.61 billion.

Escrow Account

IRB GTPL were required to, prior to the IRB GTPL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the IRB GTPL Concession Agreement read with the escrow agreement entered into among IRB GTPL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

IRB GTPL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the IRB GTPL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and
c) all payments by the NHAI including, if any, in relation to the change in scope in the IRB GTPL Project.

Withdrawals during Concession Period

IRB GTPL were required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by IRB GTPL for and in respect of the IRB GTPL Project Highway;

b) all payments relating to construction of the IRB GTPL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) operation and management ("**O&M**") expenses;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the IRB GTPL Concession Agreement, and certified by the NHAI as due and payable to it;

e) monthly proportionate provision of IRB GTPL Debt Service due in an accounting year;

f) all payments and damages certified by the NHAI as due and payable to it by IRB GTPL; and

g) balance, if any, in accordance with the instructions of IRB GTPL.

IRB GTPL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI and the lenders.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the IRB GTPL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by IRB GTPL for and in respect of the IRB GTPL Project Highway;

b) payment due to lenders;

c) all payments and damages certified by the NHAI as due and payable to it by IRB GTPL;

d) retention and payments relating to the liability for defects and deficiencies set forth in the IRB GTPL Concession Agreement;

e) incurred or accrued O&M expenses;

f) any other payments required to be made under the IRB GTPL Concession Agreement; and

g) balance, if any, in accordance with the instructions of IRB GTPL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the IRB GTPL Concession Agreement, require IRB GTPL to make alterations or modifications in the scope of the project. Any such change of scope shall be made in accordance with the provisions of the IRB GTPL Concession Agreement and the costs thereof shall be expended by IRB GTPL and reimbursed by the NHAI in accordance with the IRB GTPL Concession Agreement.

If IRB GTPL determine at any time that a change in scope is necessary, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the IRB GTPL Concession Agreement, or inform IRB GTPL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of IRB GTPL being in material default or breach of the IRB GTPL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the IRB GTPL Concession Agreement.

In the event of the NHAI being in material default or breach of the IRB GTPL Concession Agreement at any time after the IRB GTPL Appointed Date, it shall pay to IRB GTPL by way of compensation, all direct costs suffered or incurred by IRB GTPL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the IRB GTPL Concession Agreement. Compensation payable may include operation and maintenance expenses and all other costs directly attributable to such material breach or default but does not include loss of fee revenues or debt repayment or other consequential losses.

In the event that a material default or breach of the IRB GTPL Concession Agreement leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the IRB GTPL Concession Period as provided in the IRB GTPL Concession Agreement. The payment of compensation by the NHAI shall be deemed to cure the breach of the IRB GTPL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Termination of the IRB GTPL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the IRB GTPL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and IRB GTPL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, IRB GTPL shall be deemed to be in default of the IRB GTPL

Concession Agreement ("**IRB GTPL Default**"), unless the default has occurred solely as a result of any breach of the IRB GTPL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the IRB GTPL Concession Agreement and IRB GTPL fail to replenish or provide fresh performance security within a cure period of 15 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the IRB GTPL Concession Agreement, IRB GTPL fail to cure, within a cure period of 60 days, the IRB GTPL Default for which whole or part of the performance security was appropriated;

c) IRB GTPL abandon or manifest intention to abandon the operation and maintenance of the IRB GTPL Project Highway without the prior written consent of the NHAI;

d) IRB GTPL fails to roll over, renew and furnish new bank guarantee performance security subject to and in accordance with the IRB LTPL Concession Agreement, at least three months prior to expiry of subsiting bank guarantee;

e) IRB GTPL is in breach of the maintenance requirements or the safety requirements as the case may be;

f) IRB GTPL has failed to make any payment to the NHAI within the period specified in the IRB GTPL Concession Agreement;

g) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and IRB GTPL fails to cure the default within the cure period specified hereinabove;

h) a breach of the project agreements by IRB GTPL has caused a material adverse effect;

i) IRB GTPL create an encumbrance in breach of the IRB GTPL Concession Agreement;

j) IRB GTPL repudiate the IRB GTPL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the IRB GTPL Concession Agreement;

k) a change in ownership has occurred in breach of the IRB GTPL Concession Agreement;

l) there is a transfer, pursuant to law either of (i) the rights and/or obligations of IRB GTPL under any of the project agreements, or of (ii) all or part of the assets or undertaking of IRB GTPL, and such transfer causes a material adverse effect;

m) an execution levied on any of the assets of IRB GTPL has caused a material adverse effect;

n) IRB GTPL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for IRB GTPL or for the whole or material part of its assets that has a material bearing on the IRB GTPL Project;

o) IRB GTPL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

p) a resolution for winding up of IRB GTPL is passed, or any petition for winding up of IRB GTPL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, IRB GTPL is ordered to be wound up by a court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of IRB GTPL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of IRB GTPL under the IRB GTPL Concession Agreement and the project agreements; provided that:

    i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the IRB GTPL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the IRB GTPL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of IRB GTPL as at the IRB GTPL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

q) any representation or warranty of IRB GTPL which is, as of the date hereof, found to be materially false, incorrect or misleading or IRB GTPL is at any time hereafter found to be in breach thereof;

r) IRB GTPL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

s) IRB GTPL has failed to fulfil any obligation, for which failure termination has been specified in the IRB GTPL Concession Agreement;

t) IRB GTPL commit a default in complying with any other provision of the IRB GTPL Concession Agreement if such default causes a material adverse effect on the NHAI; or

u) an escrow default has occurred and IRB GTPL fail to cure the default within a cure period of 15 days.

Without prejudice to any other rights or remedies which the NHAI may have under the IRB GTPL Concession Agreement, upon the occurrence of a IRB GTPL Default, the NHAI shall be entitled to terminate the IRB GTPL Concession Agreement by issuing a termination notice to IRB GTPL, with a copy therof to the lenders. Immediately upon the issue by the NHAI of the notice of intention to terminate, the lenders shall have the right to nominate an entity to replace IRB GTPL and perform IRB GTPL's obligations under the IRB GTPL Concession Agreement. IRB GTPL shall procure that lenders shall notify the NHAI about whether they are exercising their right of substitution within 60 days of receipt of notice of intention to terminate, or the lender's notice of default. Any such substitute entity shall have the legal, financial and technical capability reasonably necessary to perform the obligations of IRB GTPL in accordance with the procedure as set out in the Substitution Agreement.

Termination by IRB GTPL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the IRB GTPL Concession Agreement, the NHAI shall be deemed to be in default of the IRB GTPL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the IRB GTPL Concession Agreement by IRB GTPL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the IRB GTPL Concession Agreement and such default has a material adverse effect on IRB GTPL;

b) the NHAI repudiates the IRB GTPL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the IRB GTPL Concession Agreement; or

c) the State commits a material default in complying with the prvisions of the State Support Agreement if such default has a material adverse effect on IRB GTPL and the breach continues for a period of 90 days from the date of notice given in this behalf by IRB GTPL to the NHAI.

Without prejudice to any other rights or remedies which IRB GTPL may have under the IRB GTPL Concession Agreement, upon the occurrence of an NHAI Default, IRB GTPL shall be entitled to terminate the IRB GTPL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, IRB GTPL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a IRB GTPL Default during the operation period, the performance security shall be forfeited and IRB GTPL would continue to be liable towards any antecedent liability, all obligations accrued before the effective date of the termination and also the obligations including divestment requirements that must be fulfilled in terms hereof after termination. In the event of the NHAI terminating the IRB GTPL Concession Agreement on account of IRB GTPL Default and in addition to the NHAI forfeiting the performance security, the NHAI shall pay to IRB GTPL 70% of the unexpired cash flow.

Upon termination on account of an NHAI Default, the NHAI shall pay to IRB GTPL, by way of termination payment, an amount equal to 105% of the unexpired cash flow.

Termination payment shall become due and payable to IRB GTPL within 15 days of a demand being made by IRB GTPL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the IRB GTPL Concession Agreement shall constitute a full and final settlement of all claims of IRB GTPL on account of termination of the IRB GTPL Concession Agreement for any reason whatsoever and IRB GTPL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

IRB GTPL shall be responsible for all defects and deficiencies in the IRB GTPL Project Highway for a period of 60 days after termination. IRB GTPL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the IRB GTPL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the IRB GTPL Concession Agreement shall be retained in the Escrow Account for a period of 90 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

15. Concession Agreement between IRB KTPL and the NHAI, each dated January 12, 2024

IRB KTPL has entered into a concession agreement in respect of the tolling, operation, management, maintenance and transfer of Kota Bypass from 1055.217 km to 1059.350 km in state of Rajasthan to be executed on a toll-operate-transfer basis (the "**IRB KTPL Concession Agreement**"), for a period of 20 years from the appointed date under the IRB KTPL Concession Agreement ("**IRB KTPL Appointed Date**") or until such date on which the IRB KTPL Concession Agreement is terminated by a termination notice ("**IRB KTPL Termination Date**", and the period between the IRB KTPL Appointed Date and the IRB KTPL Termination Date, the "**IRB KTPL Concession Period**").

Certain Definitions

"**IRB KTPL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) all rights of IRB KTPL under the project agreements; (d) financial assets, such as receivables, security deposits etc.; (e) insurance proceeds; and (f) applicable permits and authorizations relating to or in respect of the IRB KTPL Project Highway (as defined below), but does not include additional facilities;

"**IRB KTPL Project Highway**" shall mean the site comprising the following:

Stretch	State	Start (KM)	End (KM)	Length (KM)
Kota Bypass	Rajasthan	1055.217	1059.350	27.820

and all IRB KTPL Project Assets, and its operation and maintenance in accordance with the IRB KTPL Concession Agreement;

"**IRB KTPL Project**" shall mean the operation and maintenance of the IRB KTPL Project Highway in accordance with the provisions of the IRB KTPL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

Grant of Concession

Subject to, and in accordance with the provisions set out in the IRB KTPL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to IRB KTPL, and IRB KTPL have accepted the concession, including the exclusive right, license, and authority during the subsistence of the IRB KTPL Concession Agreement, to operate and maintain the IRB KTPL Project for a period of 20 years from the IRB KTPL Appointed Date.

Subject to, and in accordance with the provisions of the IRB KTPL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, IRB KTPL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the IRB KTPL Concession Agreement;

b) manage, operate, and maintain the IRB KTPL Project Highway and regulate the use thereof by third parties;

c) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the IRB KTPL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

d) perform and fulfil all of IRB KTPL's obligations under and in accordance with the IRB KTPL Concession Agreement;

e) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of IRB KTPL under the IRB KTPL Concession Agreement; and

f) neither assign, transfer or sublet, or create any lien or encumbrance on the IRB KTPL Concession Agreement, or the concession granted, or on the whole or any part of the IRB KTPL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the IRB KTPL Concession Agreement.

Fees

On and from the appointed date till the transfer date, IRB KTPL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the IRB KTPL Concession Agreement and the applicable rules and regulations. In accordance with the IRB KTPL Concession Agreement, IRB KTPL shall not collect any fees in relation to exempted vehicles.

IRB KTPL shall not collect any fee from a local user for non-commercial use of the IRB KTPL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the IRB KTPL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, IRB KTPL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, IRB KTPL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the IRB KTPL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, IRB KTPL shall pay to the NHAI in accordance with terms of the IRB KTPL Concession Agreement and prior to the IRB KTPL Appointed Date, a lumpsum upfront concession fee of an amount equivalent to ₹5.22 billion.

Escrow Account

IRB KTPL were required to, prior to the IRB KTPL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the IRB KTPL Concession Agreement read with the escrow agreement entered into among IRB KTPL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

IRB KTPL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the IRB KTPL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and
c) all payments by the NHAI including, if any, in relation to the change in scope in the IRB KTPL Project.

Withdrawals during Concession Period

IRB KTPL were required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by IRB KTPL for and in respect of the IRB KTPL Project Highway;

b) all payments relating to construction of the IRB KTPL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) operation and management ("**O&M**") expenses;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the IRB KTPL Concession Agreement, and certified by the NHAI as due and payable to it;

e) monthly proportionate provision of IRB KTPL Debt Service due in an accounting year;

f) all payments and damages certified by the NHAI as due and payable to it by IRB KTPL; and

g) balance, if any, in accordance with the instructions of IRB KTPL.

IRB KTPL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI and the lenders.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the IRB KTPL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by IRB KTPL for and in respect of the IRB KTPL Project Highway;

b) payment due to lenders;

c) all payments and damages certified by the NHAI as due and payable to it by IRB KTPL;

d) retention and payments relating to the liability for defects and deficiencies set forth in the IRB KTPL Concession Agreement;

e) incurred or accrued O&M expenses;

f) any other payments required to be made under the IRB KTPL Concession Agreement; and

g) balance, if any, in accordance with the instructions of IRB KTPL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the IRB KTPL Concession Agreement, require IRB KTPL to make alterations or modifications in the scope of the project. Any such change of scope shall be made in accordance with the provisions of the IRB KTPL Concession Agreement and the costs thereof shall be expended by IRB KTPL and reimbursed by the NHAI in accordance with the IRB KTPL Concession Agreement.

If IRB KTPL determine at any time that a change in scope is necessary, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the IRB KTPL Concession Agreement, or inform IRB KTPL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of IRB KTPL being in material default or breach of the IRB KTPL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the IRB KTPL Concession Agreement.

In the event of the NHAI being in material default or breach of the IRB KTPL Concession Agreement at any time after the IRB KTPL Appointed Date, it shall pay to IRB KTPL by way of compensation, all direct costs suffered or incurred by IRB KTPL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the IRB KTPL Concession Agreement. Compensation payable may include operation and maintenance expenses and all other costs directly attributable to such material breach or default but does not include loss of fee revenues or debt repayment or other consequential losses.

In the event that a material default or breach of the IRB KTPL Concession Agreement leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the IRB KTPL Concession Period as provided in the IRB KTPL Concession Agreement. The payment of compensation by the NHAI shall be deemed to cure the breach of the IRB KTPL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Termination of the IRB KTPL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the IRB KTPL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and IRB KTPL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, IRB KTPL shall be deemed to be in default of the IRB KTPL Concession Agreement (“**IRB KTPL Default**”), unless the default has occurred solely as a result of any breach of the IRB KTPL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the IRB KTPL Concession Agreement and IRB KTPL fail to replenish or provide fresh performance security within a cure period of 15 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the IRB KTPL Concession Agreement, IRB KTPL fail to cure, within a cure period of 60 days, the IRB KTPL Default for which whole or part of the performance security was appropriated;

c) IRB KTPL abandon or manifest intention to abandon the operation and maintenance of the IRB KTPL Project Highway without the prior written consent of the NHAI;

d) IRB KTPL fails to roll over, renew and furnish new bank guarantee performance security subject to and in accordance with the IRB LTPL Concession Agreement, at least three months prior to expiry of subsiting bank guarantee;

e) IRB KTPL is in breach of the maintenance requirements or the safety requirements as the case may be;

f) IRB KTPL has failed to make any payment to the NHAI within the period specified in the IRB KTPL Concession Agreement;

g) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and IRB KTPL fails to cure the default within the cure period specified hereinabove;

h) a breach of the project agreements by IRB KTPL has caused a material adverse effect;

i) IRB KTPL create an encumbrance in breach of the IRB KTPL Concession Agreement;

j) IRB KTPL repudiate the IRB KTPL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the IRB KTPL Concession Agreement;

k) a change in ownership has occurred in breach of the IRB KTPL Concession Agreement;

l) there is a transfer, pursuant to law either of (i) the rights and/or obligations of IRB KTPL under any of the project agreements, or of (ii) all or part of the assets or undertaking of IRB KTPL, and such transfer causes a material adverse effect;

m) an execution levied on any of the assets of IRB KTPL has caused a material adverse effect;

n) IRB KTPL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for IRB KTPL or for the whole or material part of its assets that has a material bearing on the IRB KTPL Project;

o) IRB KTPL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

p) a resolution for winding up of IRB KTPL is passed, or any petition for winding up of IRB KTPL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or IRB KTPL is ordered to be wound up by a court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of IRB KTPL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of IRB KTPL under the IRB KTPL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the IRB KTPL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the IRB KTPL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of IRB KTPL as at the IRB KTPL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

q) any representation or warranty of IRB KTPL which is, as of the date hereof, found to be materially false, incorrect or misleading or IRB KTPL is at any time hereafter found to be in breach thereof;

r) IRB KTPL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

s) IRB KTPL has failed to fulfil any obligation, for which failure termination has been specified in the IRB KTPL Concession Agreement;

t) IRB KTPL commit a default in complying with any other provision of the IRB KTPL Concession Agreement if such default causes a material adverse effect on the NHAI; or

u) an escrow default has occurred and IRB KTPL fail to cure the default within a cure period of 15 days.

Without prejudice to any other rights or remedies which the NHAI may have under the IRB KTPL Concession Agreement, upon the occurrence of a IRB KTPL Default, the NHAI shall be entitled to terminate the IRB KTPL Concession Agreement by issuing a termination notice to IRB KTPL, with a copy therof to the lenders. Immediately upon the issue by the NHAI of the notice of intention to terminate, the lenders shall have the right to nominate an entity to replace IRB KTPL and perform IRB KTPL's obligations under the IRB KTPL Concession Agreement. IRB KTPL shall procure that lenders shall notify the NHAI about whether they are exercising their right of substitution within 60 days of receipt of notice of intention to terminate, or the lender's notice of default. Any such substitute entity shall have the legal, financial and technical capability reasonably necessary to perform the obligations of IRB KTPL in accordance with the procedure as set out in the Substitution Agreement.

Termination by IRB KTPL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the IRB KTPL Concession Agreement, the NHAI shall be deemed to be in default of the IRB KTPL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the IRB KTPL Concession Agreement by IRB KTPL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the IRB KTPL Concession Agreement and such default has a material adverse effect on IRB KTPL;

b) the NHAI repudiates the IRB KTPL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the IRB KTPL Concession Agreement; or

c) the State commits a material default in complying with the prvisions of the State Support Agreement if such default has a material adverse effect on IRB KTPL and the breach continues for a period of 90 days from the date of notice given in this behalf by IRB KTPL to the NHAI.

Without prejudice to any other rights or remedies which IRB KTPL may have under the IRB KTPL Concession Agreement, upon the occurrence of an NHAI Default, IRB KTPL shall be entitled to terminate the IRB KTPL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, IRB KTPL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a IRB KTPL Default during the operation period, the performance security shall be forfeited and IRB KTPL would continue to be liable towards any antecedent liability, all obligations accrued before the effective date of the termination and also the obligations including divestment requirements that must be fulfilled in terms hereof after termination. In the event of the NHAI terminating the IRB KTPL Concession Agreement on account of IRB KTPL Default and in addition to the NHAI forfeiting the performance security, the NHAI shall pay to IRB KTPL 70% of the unexpired cash flow.

Upon termination on account of an NHAI Default, the NHAI shall pay to IRB KTPL, by way of termination payment, an amount equal to 105% of the unexpired cash flow.

Termination payment shall become due and payable to IRB KTPL within 15 days of a demand being made by IRB KTPL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the IRB KTPL Concession Agreement shall constitute a full and final settlement of all claims of IRB KTPL on account of termination of the IRB KTPL Concession Agreement for any reason whatsoever and IRB KTPL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

IRB KTPL shall be responsible for all defects and deficiencies in the IRB KTPL Project Highway for a period of 60 days after termination. IRB KTPL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the IRB KTPL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the IRB KTPL Concession Agreement shall be retained in the Escrow Account for a period of 90 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

REGULATIONS AND POLICIES

The following description is a summary of certain key regulations and policies which are applicable to the operations of the Trust, the Project SPVs. The information detailed in this section has been obtained from publications available in the public domain. The regulations set out below may not be exhaustive, and are only intended to provide general information to the investors and are neither designed nor intended to substitute for professional legal advice. The information in this section is based on the current provisions of applicable law that are subject to change or modification by subsequent legislative, regulatory, administrative or judicial decisions in India.

Laws Relating to the Business and Operations of the Trust, the Project SPVs

The primary central legislations governing the road sector are the National Highways Act, 1956 (the "**NH Act**") and the National Highways Authority of India Act, 1988 (the "**NHAI Act**").

The NH Act

In accordance with the NH Act, the GoI is vested with the power to declare a highway as a national highway and also to acquire land for this purpose. The GoI may, by notification, declare its intention to acquire any land when it is satisfied that, for a public purpose, such land is required for the building, maintenance, management or operation of a national highway, or part thereof. The NH Act prescribes the procedure for such land acquisition. Such procedure includes, *inter-alia,* a declaration of an intention to acquire, entering and inspecting such land, hearing of objections, a declaration of the acquisition and the power to take possession. The NH Act also provides for payment of compensation to owners and any other person whose right of enjoyment in the land has been affected.

The GoI is responsible for the development and maintenance of national highways. However, it may direct that such functions may also be exercised by the government of a state in which the highway is located or by any officer or authority subordinate to the GoI or to the state government. Further, the GoI has the power to enter into an agreement with any person for the development and maintenance of a part or whole of the highway. Such person would have the right to collect and retain fees at such rates as may be notified by the GoI and will also have the powers to regulate and control the traffic, for proper management of the highway, in accordance with the provisions of the Motor Vehicles Act, 1988, as amended. The GoI also has the power to make rules for carrying out the purposes of the NH Act.

National Highways Fee (Determination of Rates and Collection) Rules, 2008

The National Highways Fee (Determination of Rates and Collection) Rules, 2008 (the "**NH Fee Rules**"), regulates the collection of fees for the use of national highways. In accordance with the NH Fee Rules, the GoI may, by a notification, levy a fee for use of any section of a national highway, permanent bridge, bypass or tunnel forming part of a national highway, as the case may be. However, the GoI may, by notification, exempt any section of a national highway, permanent bridge, bypass or tunnel constructed through a public funded project from levy of such fee.

The NH Fee Rules supersede the National Highways (Temporary Bridges) Rules, 1964, the National Highways (Collection of Fees by any Person for the Use of Section of National Highways/ Permanent Bridge/ Temporary Bridge on National Highways) Rules, 1997, the National Highways (Fees for the use of National Highways Section and Permanent Bridges – Public Funded Project) Rules, 1997 and the National Highways (Rate of Fees) Rules, 1997 other than in respect of things done or omitted to be done under such rules prior to supersession. The NH Fee Rules do not apply to agreements and contracts executed or bids invited prior to the publication of such rules, i.e., prior to December 5, 2008.

The collection of fees in case of a public funded project shall commence within 45 days from the date of completion of the project. The NH Fee Rules further provide a base rate of fees applicable for the use of a section of the national highway for different categories of vehicles and the fees collected by the executing authority shall be remitted to the GoI. However, the GoI may, by notification, allow any or all of the executing authorities to appropriate the whole, or part of such fees for purposes as may be specified.

FASTag lanes on fee plazas is a policy initiative of the GoI in which there is an exclusive lane in the fee plaza for movement of vehicles fitted with FASTag. The FASTag is a device which is fitted on the front windscreen of vehicles to indicate online toll payment. The amended NH Fee Rules impose a penalty equivalent to two times the fee applicable if a vehicle not fitted with FASTag enters the exclusive FASTag lane. However, in case a user is unable to pay, due to malfunctioning electronic toll collection infrastructure, the user will be permitted to pass the fee plaza without payment.

The NH Fee rules were also amended to provide that the driver or owner of a mechanical vehicle which is loaded in excess of permissible load specified for its category, (i) shall not be permitted to use the national highway or cross the fee plaza until the excess load has been removed, and (ii) shall be liable to pay a fee to the toll collection agency equal to ten times of the fee applicable to such category of mechanical vehicle. However, in case no weighbridge has been installed at the toll plaza, no fee for overloading shall be levied.

The National Highways Rules, 1957

The National Highway Rules, 1957 (the "**NH Rules**") provide that in situations where the estimate cost of the execution of any original work on a national highway exceeds ₹1,000,000, a detailed estimated of the cost is to be forwarded to the GoI. An application for allotment of funds for meeting expenditure on an original work on a national highway must also be made to the GoI. The executing agency of the highway is required to furnish monthly progress reports and a completion report on the conclusion of the work. The NH Rules also give the consulting engineer of the GoI the right to inspect the work while it is in progress or after completion.

The NHAI Act

NHAI

The National Highways Authority of India (the "**NHAI**") was constituted pursuant to the NHAI Act and became operational in 1995. The NHAI Act details the functions the NHAI, which primarily are the development, maintenance and management of national highways and any other highways vested in, or entrusted to it, by the GoI, and matters connected therewith or incidental thereto. In accordance with the NHAI Act, the GoI carries out development and maintenance of the national highway system through NHAI. Subject to the provisions of the NHAI Act, the NHAI has the power to enter into and perform any contract necessary for the discharge of its functions. The NHAI has the power to acquire any land to discharge its functions, and such acquired land will be deemed to be land needed for a public purpose. The NHAI Act prescribes a limit in relation to the value of the contracts that may be entered into by NHAI. However, the NHAI may enter into contracts exceeding the specified value, on obtaining prior approval of the GoI. The NHAI Act provides that the contracts for acquisition, sale, or lease of immovable property on behalf of the NHAI cannot exceed a term of 30 years unless previously approved by the GoI.

As per the NHAI Works Manual, 2006, NHAI's mandate is the time and cost bound implementation of the National Highways Development Project (the "**NHDP**"). The sources of finance available to the NHAI include fund assistance from external funding agencies like the World Bank and the Asian Development Bank. NHDP Phase – I also strives to provide road connectivity to major ports. NHAI's role encompasses involving the private sector in provision, maintenance and operation of the national highways.

Financing of the NHDP

The GoI, under the Central Road Fund Act, 2000 created a fund which is required to be utilized for the development and maintenance of national highways (the "**Central Road Fund**"). Section 18 of the NHAI Act also provides for the creation of a separate NHAI Fund. Any capital grant or aid received, loan taken, borrowing made, or any other sum received by the NHAI is credited to the NHAI Fund. Certain sources for financing of the NHDP are through dedicated accruals under the Central Road Fund by levy of cess on fuel as well as involving the private sector and encouraging public private partnerships. The NHDP is also financed through long-term external loans from the World Bank, the Asian Development Bank and the Japan Bank for International Cooperation as well as through tolling of roads for different projects undertaken by the NHAI.

Private Participation in NHDP

In an effort to attract private sector participation in the NHDP, the NHAI has formulated model concession agreements where a private entity being the concessionaire is awarded a concession to build, operate and collect toll on a road for a specified period of time, which is usually up to 30 years.

The bidding for the projects takes place in two stages as per the process provided below:

1. in the pre-qualification stage, the NHAI selects certain bidders on the basis of technical and financial expertise, prior experience in implementing similar projects and previous track record; and

2. in the second stage, the NHAI invites commercial bids from the pre-qualified bidders on the basis of which the right to develop the project is awarded.

In accordance with the model concession agreement for projects above ₹1,000 million, the concessionaire meets the upfront cost and expenditure on annual maintenance and recovers the entire cost along with the interest from toll collections during the concession period. As per the 'Guidelines for Investment in Road Sector' issued by the Ministry of Shipping, Road Transport and Highways ("**MoRTH**") in 2009, in order to increase the viability of projects, a capital grant of up to 40% of the project cost is provided by the NHAI or the GoI. The quantum of grant is determined on a case to case basis and typically constitutes the bid parameter in Build, Operate, Transfer ("**BOT**") projects which are generally not viable based on toll revenue alone. For certain projects with high traffic volumes, concessionaire also offers a negative grant (i.e., premium) to the NHAI. The concessionaire at the end of the concession period transfers the road back to the Government (free of charge and clear of all encumbrances). The concessionaire's investment in the road is recovered directly through user fees collected by way of tolls. As per the model concession agreement for annuity based projects, the concessionaire is required to meet the entire upfront cost (no grant is paid by the NHAI or the GoI) and the expenditure on annual maintenance for annuity based projects. The concessionaire recovers the entire investment through pre-determined annuity payments to be made by the NHAI or the GoI. Furthermore, MoRTH approved certain amendments to the model concession agreement, *inter-alia*, in relation to deferment of premium payments.

Exit Policy

The CCEA in May 2015 approved a comprehensive exit policy framework with the objective to mobilize funds in the market. This policy framework now permits divestment of 100% equity by concessionaires/developers after two years of completion of construction to facilitate unlocking of funds for new projects. The equity divested is required to be invested by promoters in their new projects. This comprehensive exit policy framework is expected to harmonize certain conditions across all concessions signed prior to 2009 with the policy framework for post 2009 contracts which permit divestment of equity up to 100%, two years after completion of construction.

In November 2020, the MoRTH in modified the change in ownership clause in the Hybrid Annuity Mode ("**HAM**") projects and permitted the bidders/consortium members to dilute their equity after a period of six months from the commercial operations date ("**COD**"). Prior to the relaxation, the concessionaire/bidders/consortium members had to retain their equity for a period of two years from COD. Further, MoRTH in May 2022 approved changes in the model concession agreements of Build-Operate-Transfer projects and permitted the change of ownership from the existing two years to one year after COD/issuance of completion certificate and completion of punch list items.

Rationalized Compensation

The CCEA in November 2015 approved a policy for rationalized compensation to concessionaires for languishing national highway projects in BOT mode for delays that are not attributable to the concessionaires. Under the policy, the NHAI is authorized to allow an extension of the concession period for BOT (Toll) projects while keeping the original operation period unchanged. The NHAI has also been authorised to pay compensatory annuities to the concessionaire corresponding to the actual period of delay that is not attributable to the concessionaire upon successful completion of the project. In these cases, the construction period will be enhanced but the tenure of the concession will remain unchanged.

One Time Fund Infusion

The CCEA in October 2015 gave its approval to the NHAI for a one-time infusion of funds with the purpose of reviving and physically completing stalled projects in the advanced stages of completion. As per the policy, the amount of funds required in each case shall be approved by NHAI on a case to case basis.

Bidder Information

MoRTH has developed the Bidder Information Management System ("**BIMS**") to streamline the process of pre-qualification of bidders for EPC mode of contracts for all national highway works, with enhanced transparency and objectivity. BIMS works as a data base of bidder information that covers basic details, civil works experience, cash accruals and networth, and annual turnover so that bidders' pre-qualification can be assessed based on evaluation parameters like threshold capacity and bid capacity from already stored data and the technical evaluation can be carried out in a faster manner.

Land Acquisition

While land is acquired for national highway projects under the NH Act, the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (the "**Land Acquisition Act**") must also be complied with. MoRTH has issued comprehensive guidelines on land acquisition for national highways taking into account the applicability of the Land Acquisition Act.

Arbitral Awards

CCEA on August 31, 2016 approved various measures to revive the construction sector. An office memorandum dated September 5, 2016 was issued by the National Institute for Transforming India with certain proposals. On November 20, 2019, the CCEA approved certain proposals in relation to the arbitrations by or against government entities, for the effective implementation of the CCEA's decision on August 31, 2016 on its initiatives to revive the construction sector. Initially, the CCEA had approved the proposal that government agencies will be required to pay 75% of the arbitral award to the concessionaire against a bank guarantee, in cases where the award already announced is challenged. However, pursuant to a press release dated November 20, 2019, the CCEA approved, *inter-alia,* that where a government entity has challenged an arbitral award, resultant of which the amount of the arbitral award has not been paid, 75% of such award will be paid by the government entity to the contractor or the concessionaire against a bank guarantee only for the said 75% and not for its interest component. In relation to interest payable to the government entity, if a subsequent court order required the refund of 75% of the amount, the payment of such amounts will be required to be made as per the court orders. On October 29, 2021, the Department of Expenditure inserted a new Rule 227A in the General Finance Rules, 2017 ("**GFR**") to incorporate the above decision of the CCEA. The above rule further requires payment to be made into a designated escrow account with the stipulation that the proceeds will be used: (i) for the payment of lenders' dues; (ii) for completion of the project, and (iii) for completion of other projects. The balance remaining in the escrow account may be used by the contractor/concessionaire with prior approval of the lead banker and the ministry/department. Retention money and other amounts withheld may also be released against the bank guarantee subject to eligibility conditions and applicable contractual provisions.

Indian Tolls Act, 1851

In accordance with the Indian Tolls Act, 1851 (the "**Tolls Act**"), state governments have been vested with the power to levy tolls at such rates as they deem fit, to be levied upon any road or bridge, made or repaired at the expense of the GoI or any state government. The tolls levied under the Tolls Act, are deemed to be 'public revenue' and the collection of tolls can be placed under the management of any person the state governments' may deem fit. Such persons are instructed with the same responsibilities as if they were employed in the collection of land revenue. Further, all police officers are bound to assist the toll collectors when required in the implementation of the Tolls Act. The Tolls Act further gives power for recovery of toll and exempts certain category of people from payment of toll.

Provisions under the Constitution of India and other legislations in relation to collection of toll

Entry 59, List II of Schedule VII read with Article 246 of the Constitution of India vests state governments with the power to levy tolls. Further, in accordance with the Tolls Act, state governments have been vested with the power to levy tolls at such rates as they deem fit.

Control of National Highways (Land and Traffic) Act, 2002

The Control of National Highways (Land and Traffic) Act, 2002 (the "**Control of NH Act**") provides for control of land within national highways, right of way and traffic moving on national highways and also for removal of unauthorised occupation thereon.

In accordance with the provisions of the Control of NH Act, the GoI has established the Highway Administration which is governed by Highway Administration Rules, 2004. Its functions include maintenance of land records and issuance of permits. Under the Control of NH Act, all land that forms part of a highway which vests in the GoI, or that which does not already vest in the GoI but has been acquired for the purpose of highways shall be deemed to be the property of the GoI. The Control of NH Act prohibits any person from occupying any highway land or discharging any material through drain on such land without the permission of the Highway Administration or any officer authorised by such administration. The Control of NH Act permits the grant of lease and license for use of highway land for temporary use.

Other Laws and Regulations

In addition to the aforementioned legislations which are applicable to the Trust, the Project SPVs, certain other material legislations that are applicable to the operations of the Trust, the Project SPVs are set out below.

In addition to such legislations, we are also required to comply with the provisions of various tax-related legislations, intellectual-property related legislations and other applicable law for our day-to-day operations.

Indian Trusts Act, 1882

The Indian Trusts Act, 1882 ("**Trusts Act**") governs all private trusts in India.

The Trusts Act sets out the purpose for which private trusts can be established, the manner in which they may be created, executed and extinguished. The person creating a trust under the Trusts Act is the author of such trust, the person to whom the author grants the power and authority to regulate the trust is the trustee and the persons for whose benefit such trust has been created are the beneficiaries of such trust. The Trust Act sets out the rights, duties, liabilities and powers of the trustees and the beneficiaries *vis-a-vis* the trust. The Trust has been settled in accordance with the provisions of the Trusts Act.

InvIT Regulations

The InvIT Regulations set out the framework for infrastructure investment trusts and the registration and regulation thereof. An infrastructure investment trust is required to obtain a certificate of registration from the SEBI. The InvIT Regulations prescribe, *inter-alia*, the eligibility criteria and the rights and responsibilities of the parties to an infrastructure investment trust, namely its sponsor, investment manager, trustee and project manager; and the rights and responsibilities of the valuer and auditor of an infrastructure investment trust. Parties to an infrastructure investment trust are required to maintain the eligibility conditions specified under the InvIT Regulations of the InvIT Regulations on an ongoing basis. Infrastructure investment trusts and parties to infrastructure investment trusts are also required to comply with the code of conduct prescribed under the InvIT Regulations.

Environment Regulation

Infrastructure projects must also ensure compliance with environmental legislation such as the Water (Prevention and Control of Pollution) Act, 1974 ("**Water Pollution Act**"), the Air (Prevention and Control of Pollution) Act, 1981 ("**Air Pollution Act**") and the Environment Protection Act, 1986 ("**Environment Act**"). The Water Pollution Act aims to prevent and control water pollution. This legislation provides for the constitution of a Central Pollution Control Board and State Pollution Control Boards. The functions of the Central Pollution Control Board include, *inter-alia*, coordination of activities of the State Pollution Control Boards, collecting data relating to water pollution and the measures devised for the prevention and control of water pollution and prescription of standards for streams or wells. The State Pollution Control Boards are responsible for, *inter-alia*, the planning for programmes for prevention and control of pollution of streams and wells, collecting and disseminating information relating to water pollution and its prevention and control, inspection of sewage or trade effluents, works and plants for their treatment and to review the specifications and data relating to plants set up for treatment and purification of water, laying down or annulling the effluent standards for trade effluents and for the quality of the receiving waters, and laying down standards for treatment of trade effluents to be discharged. This legislation prohibits any person from establishing any industry, operation or process or any treatment and disposal system, which is likely to discharge trade effluent into a stream, well or sewer, or bring into use any new or altered outlet for discharge of sewage, or begin to make any new discharge of sewage without taking prior consent of the State Pollution Control Board.

The Central and State Pollution Control Boards constituted under the Water Pollution Act are also to perform functions as per the Air Pollution Act for the prevention and control of air pollution. The Air Pollution Act aims for the prevention, control and abatement of air pollution. It is mandated under this Act that no person can, without the previous consent of the State Pollution Control Board, establish or operate any industrial plant in an air pollution control area as notified by the State Government. The Environment Act has been enacted for the protection and improvement of the environment. The Environment Act empowers the GoI to take measures to protect and improve the environment such as by laying down standards for emission or discharge of pollutants, providing for restrictions regarding areas where industries may operate and so on. The GoI may make rules for regulating environmental pollution.

With respect to forest conservation, the Forest (Conservation) Act, 1980 ("**Forest Conservation Act**") applies to forest land in the country. The Lok Sabha has recently passed the Forest (Conservation) Amendment Bill, 2023, which seeks to the amend the provisions of the Forest Conservation Act, including, *inter-alia*, changing the name of the legislation to Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and exemptions to strategic projects related to national security and public utility projects from the provisions of the Forest Conversation Act.

The Ministry of Environment and Forests (the "**MoEF**") mandates that Environment Impact Assessment ("**EIA**") must be conducted for specified projects. In the process, the MoEF receives proposals for the setting up of projects and assesses their impact on the environment before granting clearances to the projects. The EIA Notification S.O. 1533, issued on September 14, 2006 (the "**EIA Notification**") and amended from time to time, under the provisions of the Environment Act, prescribes that new construction of specified projects require prior environmental clearance from the MoEF. The environmental clearance must be obtained from the MoEF according to the procedure specified in the EIA Notification. No construction work or preparation of land by the project management except for securing the land, relating to the setting up of a specified project can be undertaken until such clearance is obtained. Under the EIA Notification, the environmental clearance process for new projects consists of four stages – screening, scoping, public consultation and appraisal. After completion of public consultation, the applicant is required to make appropriate changes in the draft 'EIA Report' and the 'Environment Management Plan.' The final EIA Report has to be submitted to the concerned regulatory authority for appraisal. The regulatory authority is required to give its decision within 105 days of the receipt of the final EIA Report. The EIA Guidance Manual for Highways, 2010 explains the four stages of the environmental clearance process and the contents of the EIA Report required to be submitted by highway projects.

Public Liability Insurance Act, 1991

The Public Liability Insurance Act, 1991 (the "**Public Liability Act**"), imposes liability on the owner or controller of hazardous substances for any damage arising out of an accident involving such hazardous substances. A list of 'hazardous substances' covered by the legislation has been enumerated by the Government by way of a notification. The owner or handler is also required to take out an insurance policy insuring against liability under the legislation. The rules made under the Public Liability Act mandate that the employer has to contribute towards the Environment Relief Fund, a sum equal to the premium paid on the insurance policies. This amount is payable to the insurer.

Green Highways (Plantation, Transplantation, Beautification and Maintenance) Policy, 2015

In September 2015, MoRTH has launched Green Highways (Plantation, Transplantation, Beautification and Maintenance) Policy, 2015 which will require road developers to earmark one per cent of a project's total cost for planting of trees and shrubs across the national highways. Under this policy, the maintenance of such plantations will be outsourced through a bidding process to plantation agencies. MoRTH/NHAI will appoint the authorized agency for empanelment of such plantation agencies.

Foreign Investment Regulations

Foreign investment in Indian securities is governed by the provisions of the FEMA, read with the applicable FEMA Rules, the FEMA (Mode of payment and Reporting of Non-Debt Instruments) Regulations, 2019 and the consolidated FDI Policy issued by the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government. Foreign investment is permitted (except in the prohibited sectors) either through the automatic route or the approval route, depending upon the sector in which foreign investment is sought to be made. Under the FEMA Rules and the current consolidated FDI Policy, effective from October 15, 2020, an infrastructure investment trust registered and regulated by the SEBI under the InvIT Regulations, being an ‘investment vehicle’, is permitted to receive foreign investment from a person resident outside India subject to the terms and conditions specified in the FEMA Rules.

All investments by entities of a country which shares land border with India or where the beneficial owner of an investment into India is situated in or is a citizen of any such country will require prior approval of the Government of India. Further, in the event of transfer of ownership of any existing or future foreign direct investment in an entity in India, directly or indirectly, resulting in the beneficial ownership falling within the purview of the above restriction, such subsequent change in the beneficial ownership will also require approval of the Government of India. A multilateral bank or fund, of which India is a member, shall not be treated as an entity of a particular country nor shall any country be treated as the beneficial owner of the investments of such bank or fund in India.

Downstream investment by an infrastructure investment trust shall be regarded as indirect foreign investment if either the sponsor or the investment manager of such an infrastructure investment trust is not Indian ‘owned and controlled’ as defined in FEMA Rules.

Downstream investment by an ‘investment vehicle’ is required to conform to the sectoral caps and conditions/restrictions, if any, as applicable to the company in which the downstream investment is made as per the FDI Policy. Foreign investment of up to 100% through the automatic route is permitted in the infrastructure sector in India. An infrastructure investment trust that receives foreign investment shall be required to make such report and in such format to the RBI or to the SEBI as may be prescribed by them from time to time.

The payment for the units of an infrastructure investment trust acquired by a person resident or registered/ incorporated outside India shall be made in accordance with the Foreign Exchange Management (Deposit) Regulations, 2016 and other applicable law.

Further, any person who is a non-resident and holds units of an infrastructure investment trust in accordance with the FEMA Rules may pledge such units (i) in favor of a bank in India to secure the credit facilities being extended to the Indian company for bona fide purposes; (ii) in favor of an overseas bank to secure the credit facilities being extended to the person, or a person resident outside India who is the promoter of the Indian company or the overseas group company of the Indian company; (iii) in favor of a Non-Banking Financial Company registered with the RBI to secure credit facilities being extended to the Indian company for bona fide purposes; and (iv) subject to the authorized dealer bank satisfying itself of the compliance of the conditions stipulated by the RBI in this regard.

Laws Relating to Employment

Certain other laws and regulations that may be applicable to the Trust, the Project SPVs include the following:

- Contract Labour (Regulation and Abolition) Act, 1970;
- Payment of Wages Act, 1936;
- Payment of Bonus Act, 1965;
- Employees’ State Insurance Act, 1948;
- Employees’ Provident Funds and Miscellaneous Provisions Act, 1952;
- Equal Remuneration Act, 1976;
- Payment of Gratuity Act, 1972;
- Shops and Commercial Establishments Acts, where applicable;
- Minimum Wages Act 1948;
- Industrial Disputes Act, 1947;
- Employees Compensation Act, 1923;
- The Code of Wages, 2019;
- The Occupational Safety, Health and Working Conditions Code, 2020;
- The Industrial Relations Code, 2020; and
- The Code on Social Security, 2020

The Code on Wages, 2019 will come into force on such date as may be notified in the official gazette of India by the central government. Once effective, it will subsume the Equal Remuneration Act, 1976, the Minimum Wages Act, 1948, the Payment of Bonus Act, 1965 and the Payment of Wages Act, 1936. However, certain provisions relating to the central advisory board have been brought into force by the Ministry of Labor and Employment. Further, the Occupational Safety, Health and Working Conditions Code, 2020, the Industrial Relations Code, 2020 and the Code on Social Security, 2020 will subsume various legislations including the Contract Labour (Regulation and Abolition) Act, 1970, the Industrial Disputes Act, 1947, the Employees Compensation Act, 1923, the Employees' State Insurance Act, 1948, the Employees' Provident Funds and Miscellaneous Provisions Act, 1952, the Maternity Benefit Act, 1961 and the Payment of Gratuity Act, 1972, upon being brought into force.

LEVERAGE

The following tables present (a) the capital structure of the Trust (including any borrowings or deferred payments) on a consolidated basis and a standalone basis as at December 31, 2023; and (b) the capital structure of each of the Project SPVs (including any borrowings or deferred payments) on a standalone basis as at December 31, 2023.

The information presented below should be read in conjunction with the sections "*Objects of the Issue*", "*Financial Statements*" and "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" on pages 69, 333 and 666, respectively.

Consolidated capital structure of the Trust (including any borrowings or deferred payments)

Particulars	As at December 31, 2023	
	Pre-Issue (₹ in millions)	Post-Issue(1) (₹ in millions)
Equity:		
Unit Capital	115,445.40	137,972.40
Subordinate Debt	16,916.65	16,916.65
Other Equity		
Other reserves	(14,777.41)	(14,777.41)
Non -controlling interests	1.39	1.39
Total unit holder's equity	**117,586.03**	**140,113.03**
Borrowings*		
Loan from related parties (a)	97.66	97.66
Non-current Borrowings		
Indian rupee loan from banks (secured) (b)	109,294.53	109,294.53
Indian rupee loan from financial institutions (secured) (c)	35,353.12	35,353.12
Non-convertible debentures (secured) (d)	27,987.76	27,987.76
Total (e) = (b+c+d)	**172,635.41**	**172,635.41**
Current maturities of long term borrowings		
Indian rupee loan from banks (secured) (f)	737.46	737.46
Indian rupee loan from financial institutions (secured) (g)	362.50	362.50
Non convertible debentures (secured) (h)	53.38	53.38
Total (i) = (f+g+h)	**1,153.34**	**1,153.34**
Total Debt (a+e+i)	**173,886.41**	**173,886.41**
Total Capitalization	**291,472.44**	**313,999.44**

(1) *Assuming full subscription in the Issue. As adjusted to reflect the number of Units issued pursuant to the Issue and the use of proceeds from the Issue.*
**Excludes interest accrued but not due and unamortised transaction cost.*

Standalone capital structure of the Trust (including any borrowings or deferred payments)

Particulars	As at December 31, 2023	
	Pre-Issue (₹ in millions)	Post-Issue(1) (₹ in millions)
Equity:		
Unit Capital	115,445.40	137,972.40
Other Equity	17,674.36	17,674.36
Total unit holder's equity	**133,119.76**	**155,646.76**
Borrowings*		
Non - current Borrowings		
Indian rupee loan from banks (secured) (a)	34,086.45	34,086.45
Indian rupee loan from financial institutions (secured) (b)	28,391.64	28,391.64
Total (c) = (a+b)	**62,478.09**	**62,478.09**

Particulars	As at December 31, 2023	
	Pre-Issue (₹ in millions)	**Post-Issue[1] (₹ in millions)**
Current maturities of long term borrowings		
Indian rupee loan from banks (secured) (d)	436.25	436.25
Indian rupee loan from financial institutions (secured) (e)	362.50	362.50
Total (f) = (d+e)	**798.75**	**798.75**
Total Debt (c + f)	**63,276.84**	**63,276.84**
Total Capitalization	**196,396.60**	**218,923.60**

(1) Assuming full subscription in the Issue. As adjusted to reflect the number of Units issued pursuant to the Issue and the use of proceeds from the Issue.
**Excludes interest accrued but not due and unamortised transaction cost.*

Standalone capital structure of the Project SPVs (including any borrowings or deferred payments)

AETL

Particulars	As at December 31, 2023	
	Pre-Issue (₹ in millions)	**Post-Issue (₹ in millions)**
Shareholders' Funds:		
Equity Share Capital	4,365.00	4,365.00
Other Equity	-7,746.96	-7,746.96
Total Shareholders' Funds	**-3,381.96**	**-3,381.96**
Borrowings*#		
Non - current Borrowings		
Secured loan from related parties (a)	6,713.25	6,713.25
Unsecured loan from related parties (b)	9,898.77	9,898.77
Unsecured loan from related parties- MMRA(c)	387.75	387.75
Subordinate Debt (d)	10,425.40	10,425.40
Total (e = a+b+c+d)	**27,425.17**	**27,425.17**
Current maturities of long term borrowings		
Secured loan from related parties (f)	52.96	52.96
Unsecured loan from related parties (g)	43.94	43.94
Unsecured loan from related parties - MMRA (h)	3.06	3.06
Total (i = f+g+h)	**99.96**	**99.96**
Current Borrowing from related parties (j)	**69.59**	**69.59**
Total Debt (e+i+j)	**27,594.72**	**27,594.72**
Total Capitalization	**24,212.76**	**24,212.76**

**Excludes interest accrued but not due.*
 # Includes Sub debt taken from Trust for the amount of Rs.10,425.40 million, reclassified on account of interest being charged from April 03, 2023.

CGTL

Particulars	As at December 31, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	2,035.00	2,035.00
Subordinate Debt	5,305.85	5,305.85
Other Equity	(1,113.94)	(1,113.94)
Total Shareholders' Funds	**6,226.91**	**6,226.91**
Borrowings*		
Non - current Borrowings		
Indian rupee loan from banks (secured) (a)	13,717.51	13,717.51
Current maturities of long term borrowings		
Indian rupee loan from banks (secured) (b)	186.20	186.20
Total (c) = (a+b)	**13,903.71**	**13,903.71**
Current Borrowings from related parties (d)	879.09	879.09
Total Debt (c+d)	**14,782.80**	**14,782.80**
Total Capitalization	**21,009.71**	**21,009.71**

Excludes interest accrued but not due and unamortized transaction cost.

IRB HMTL

Particulars	As at December 31, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	3,715.00	3,715.00
Subordinate Debt	2,347.32	2,347.32
Other Equity	(1,112.17)	(1,112.17)
Total Shareholders' Funds	**4,950.15**	**4,950.15**
Borrowings*#		
Non - current Borrowings		
Secured loan from related parties (a)	14,559.09	14,559.09
Unsecured loan from related parties (b)	30.98	30.98
Unsecured loan from related parties - MMRA (c)	42.39	42.39
Subordinate Debt (d)	9,862.69	9,862.69
Total (e = a+b+c+d)	**24,495.15**	**24,495.15**
Current maturities of long term borrowings		
Secured loan from related parties (f)	386.98	386.98
Unsecured loan from related parties (g)	0.82	0.82
Unsecured loan for MMRA from related parties (h)	1.13	1.13
Total (i = f+g+h)	**388.93**	**388.93**
Total Debt (e+i)	**24,884.08**	**24,884.08**
Total Capitalization	**29,834.23**	**29,834.23**

Excludes interest accrued but not due.

Includes Sub debt taken from Trust for the amount of Rs.9,862.69 million, reclassified on account of interest being charged from April 03, 2023.

IRB WTL

Particulars	As at December 31, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	1,741.94	1,741.94
Subordinate Debt	6,394.89	6,394.89
Other Equity	(5,524.56)	(5,524.56)
Total Shareholders' Funds	**2,612.27**	**2,612.27**
Borrowings*#		
Non - current Borrowings		
Secured loan from related parties (a)	9,156.97	9,156.97
Unsecured loan from related parties (b)	4,358.28	4,358.28
Unsecured loan from related parties - MMRA (c)	393.72	393.72
Subordinate Debt (d)	7,788.81	7,788.81
Total (e = a+b+c+d)	**21,697.78**	**21,697.78**
Current maturities of long term borrowings		
Secured loan from related parties (f)	381.57	381.57
Unsecured loan from related parties (g)	105.77	105.77
Unsecured loan from related parties - MMRA (h)	16.41	16.41
Total (i = f+g+h)	**503.75**	**503.75**
Borrowing from related parties (j)	**2,211.80**	**2,211.80**
Total Debt (e+i+j)	**24,413.33**	**24,413.33**
Total Capitalization	**27,025.60**	**27,025.60**

**Excludes interest accrued but not due.*

\# *Includes Sub debt taken from Trust for the amount of Rs.7,788.81 million, reclassified on account of interest being charged from April 03, 2023.*

KGTL

Particulars	As at December 31, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	1,555.00	1,555.00
Subordinate Debt	2,930.74	2,930.74
Other Equity	(1,667.58)	(1,667.58)
Total Shareholders' Funds	**2,818.16**	**2,818.16**
Borrowings*#		
Non - current Borrowings		
Secured loan from related parties (a)	9,508.44	9,508.44
Unsecured loan from related parties (b)	189.17	189.17
Subordinate Debt (c)	2,399.43	2,399.43
Total (d = a+b+c)	**12,097.04**	**12,097.04**
Current maturities of long term borrowings		
Secured loan from related parties (e)	436.08	436.08
Unsecured loan from related parties (f)	8.68	8.68
Total (g = e+f)	**444.76**	**444.76**
Borrowing from related parties (h)	**60.00**	**60.00**
Total Debt (d+g+h)	**12,601.80**	**12,601.80**

Total Capitalization	**15,419.96**	**15,419.96**

Excludes interest accrued but not due.

Includes Sub debt taken from Trust for the amount of Rs.2,399.43 million, reclassified on account of interest being charged from April 03, 2023.

KTL

Particulars	As at December 31, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	3,280.00	3,280.00
Subordinate Debt	-	-
Other Equity	(5,970.22)	(5,970.22)
Total Shareholders' Funds	**(2,690.22)**	**(2,690.22)**
Borrowings*#		
Non - current Borrowings		
Secured loan from related parties (a)	4,641.91	4,641.91
Unsecured loan from related parties (b)	9,161.69	9,161.69
Unsecured loan for MMRA from related parties (c)	434.92	434.92
Subordinate Debt (d)	4,472.86	4,472.86
Total (e = a+b+c+d)	**18,711.38**	**18,711.38**
Current maturities of long term borrowings		
Secured loan from related parties (f)	159.90	159.90
Unsecured loan from related parties (g)	169.55	169.55
Unsecured loan for MMRA from related parties (h)	14.98	14.98
Total (i = f+g+h)	**344.43**	**344.43**
Borrowing from related parties (j)	**74.55**	**74.55**
Total Debt (e+i+j)	**19,130.36**	**19,130.36**
Total Capitalization	**16,440.14**	**16,440.14**

Excludes interest accrued but not due.

Includes Sub debt taken from Trust for the amount of Rs.4,472.86 million, reclassified on account of interest being charged from April 03, 2023.

SYTL

Particulars	As at December 31, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	982.50	982.50
Other Equity	(2,905.59)	(2,905.59)
Total Shareholders' Funds	**(1,923.09)**	**(1,923.09)**
Borrowings*#		
Borrowings from related parties (a)	4,000.00	4,000.00
Non - current Borrowings		
Non-convertible debentures (secured) (b)	5,910.00	5,910.00
Subordinated debt (c)	4,627.17	4,627.17
Total (d) = (b+c +d)	**10,537.17**	**10,537.17**
Total Debt (a+d)	**14,537.17**	**14,537.17**

Total Capitalization	**12,614.08**	**12,614.08**

Excludes interest accrued but not due and unamortized transaction cost.

 # Includes Sub debt taken from Trust for the amount of Rs.4,627.17 million, reclassified on account of interest being charged from April 03, 2023.

UTL

Particulars	As at December 31, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	1,168.00	1,168.00
Subordinate Debt	11,727.52	11,727.52
Other Equity	(4,673.30)	(4,673.30)
Total Shareholders' Funds	**8,222.22**	**8,222.22**
Borrowings*		
Non - current Borrowings		
Indian rupee loan from banks (secured) (a)	8,226.23	8,226.23
Non-convertible debentures (secured) (b)	6,927.76	6,927.76
Total (c = a+b)	**15,153.99**	**15,153.99**
Current maturities of long term borrowings		
Indian rupee loan from banks (secured) (d)	73.76	73.76
Non-convertible debentures (secured) (e)	53.38	53.38
Total (f = d+e)	**127.14**	**127.14**
Current Borrowings from related parties (g)	1,895.35	1,895.35
Total Debt (c+f+g)	**17,176.48**	**17,176.48**
Total Capitalization	**25,398.70**	**25,398.70**

Excludes interest accrued but not due and unamortized transaction cost.

YATL

Particulars	As at December 31, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	2,157.57	2,157.57
Other Equity	(4,197.79)	(4,197.79)
Total Shareholders' Funds	**(2,040.22)**	**(2,040.22)**
Borrowings*#		
Borrowings from related parties (a)	4,000.00	4,000.00
Non - current Borrowings		
Non-convertible debentures (secured) (b)	15,150.00	15,150.00
Subordinated debt (c)	17,148.14	17,148.14
Total (d) = (b+c)	**32,298.14**	**32,298.14**
Current Borrowings from related parties (e)	**354.80**	**354.80**
Total Debt (a+d+e)	**36,652.94**	**36,652.94**
Total Capitalization	**34,612.72**	**34,612.72**

Excludes interest accrued but not due and unamortized transaction cost.

 # Includes Sub debt taken from Trust for the amount of Rs.17,148.15 million, reclassified on account of interest being charged from April 03, 2023.

PDTPL

Particulars	As at December 31, 2023	
	Pre-Issue	Post-Issue(1)
	(₹ in millions)	(₹ in millions)
Shareholders' Funds:		
Equity Share Capital	1,212.50	1,212.50
Subordinate Debt	3,637.50	3,637.50
Other Equity	1,780.00	1,780.00
Total Shareholders' Funds	**6,630.00**	**6,630.00**
Borrowings*		
Non - current Borrowings		
Indian rupee loan from banks (secured) (a)	1,327.53	1,327.53
Indian rupee loan from financial institutions (secured) (b)	6,961.48	6,961.48
Total Debt (c = a+b)	**8,289.01**	**8,289.01**
Total Capitalization	**14,919.01**	**14,919.01**

**Excludes interest accrued but not due and unamortized transaction cost.*

IRB GEPL

Particulars	As at December 31, 2023	
	Pre-Issue	Post-Issue
	(₹ in millions)	(₹ in millions)
Shareholders' Funds:		
Equity Share Capital	7,155.00	7,155.00
Subordinate Debt	-	-
Other Equity	(671.11)	(671.11)
Total Shareholders' Funds	**6,483.89**	**6,483.89**
Borrowings*#		
Borrowings from related parties	-	-
Non - current Borrowings		
Indian rupee loan from banks (secured) (a)	51,936.81	51,936.81
Subordinated Debt (b)	21,465.00	21,465.00
Total (c) = (a+b)	**73,401.81**	**73,401.81**
Current maturities of long term borrowings		
Indian rupee loan from banks (secured) (d)	41.25	41.25
Total Debt (c+d)	**73,443.06**	**73,443.06**
Total Capitalization	**79,926.95**	**79,926.95**

**Excludes interest accrued but not due and amortization cost.*
 # Includes Sub debt taken from Trust for the amount of Rs.21,465 million.

STPL

Particulars	As at December 31, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	0.50	0.50
Subordinate Debt	-	-
Other Equity	73.32	73.32
Total Shareholders' Funds	**73.82**	**73.82**
Borrowings		
Current Borrowings from related parties	97.66	97.66
Total Debt	**97.66**	**97.66**
Total Capitalization	**171.48**	**171.48**

IRB LTPL

Particulars	As at December 31, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	0.50	4,205.80
Subordinate Debt	-	12,617.40
Other Equity	-0.03	-0.03
Total Shareholders' Funds	**0.47**	**16,823.17**
Borrowings		
Borrowings from related parties	0.60	0.60
Long term borrowings	-	-
Current maturities of long term borrowings	-	-
Total Debt	**0.60**	**0.60**
Total Capitalization	**1.07**	**16,823.77**

IRB GTPL

Particulars	As at December 31, 2023	
	Pre-Issue (₹ in millions)#	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	-	1,032.85
Subordinate Debt	-	3,098.55
Other Equity	-	-
Total Shareholders' Funds	-	**4,131.40**
Borrowings		

Borrowings from related parties	-	-
Long term borrowings	-	-
Current maturities of long term borrowings	-	-
Total Debt	-	-
Total Capitalization	-	**4,131.40**

#The Project SPV was incorporated by the Trust on January 1, 2024 and accordingly, pre-Issue details as of December 31, 2023 is not applicable.

IRB KTPL

Particulars	As at December 31, 2023	
	Pre-Issue	Post-Issue
	(₹ in millions)#	(₹ in millions)
Shareholders' Funds:		
Equity Share Capital	-	393.48
Subordinate Debt	-	1,180.43
Other Equity	-	0
Total Shareholders' Funds	-	**1,573.90**
Borrowings		
Borrowings from related parties	-	
Long term borrowings	-	
Current maturities of long term borrowings	-	-
Total Debt	-	-
Total Capitalization	-	**1,573.90**

#The Project SPV was incorporated by the Trust on January 1, 2024 and accordingly, pre-Issue details as of December 31, 2023 is not applicable.

Leverage Policy

This policy sets out the framework for selection and repayment of borrowings by the Manager Group. The policy should be read together with a letter dated February 28, 2023 issued by the SEBI, pursuant to which the SEBI has exempted us from the requirement to have a mandatory 'AAA' credit rating and a track record of six distributions to raise debt above 49% of the value of the Trust Assets and up to 70% of the value of the Trust Assets, subject to obtaining a credit rating, disclosure of such credit rating and obtaining unitholder approval.

The key terms of the Leverage Policy include, *inter-alia*:

(i) The Manager Group Members may avail additional borrowings or debt from time to time in accordance with the Annual Budget and Business Plan of the respective Manager Group Members, the Transaction Documents, and the InvIT Regulations. Any additional borrowing or creation of security that is not in accordance with the Annual Budget and Business Plan will require the prior approval of the shareholders of the Investment Manager.

(ii) In accordance with Regulation 20 of the InvIT Regulations, if the aggregate consolidated borrowings and deferred payments of the Trust, holdco, and the SPVs, net of cash and cash equivalents exceeds 25% of the value of the Trust Assets, then for any further borrowing:

a. Up to 49% of the value of the Trust Assets, the Trust shall:

- obtain credit rating from a credit rating agency registered with the SEBI; and
- seek approval of the Unitholders in the manner as specified in Regulation 22 of the InvIT Regulations.

b. Above 49% of the value of the Trust Assets and up to 70% of the value of the Trust Assets, the Trust shall:

- obtain a credit rating from a credit rating agency registered with the SEBI and disclose it to the stock exchange(s);
- utilize the funds only for acquisition or development of infrastructure projects;
- obtain the one-time approval of Unitholders.

(iii) If either of the conditions specified above are breached on account of market movements of the price of the underlying assets or securities, the Investment Manager shall inform the Trustee at the earliest and ensure that the condition is satisfied within six months of the breach, in accordance with the InvIT Regulations.

(iv) The limits in relation to the aggregate consolidated borrowings and deferred payments of the Trust, any Holdcos and the SPVs, net of cash and cash equivalents, shall be as approved by at least 60% of the Unitholders from time to time, unless otherwise provided under the InvIT Regulations.

(v) In no event will the aggregate borrowings exceed 70% of the value of the Trust Assets, or such other limit as provided under the InvIT Regulations.

(vi) The Trust shall be permitted to borrow monies through any permitted means, by any instrument, in Indian or foreign currency, as permitted by applicable law.

(vii) The Investment Manager shall be permitted to borrow monies on behalf of the Trust, subject to the approval of its board of directors or such other committee of the board of directors of the Investment Manager as may be constituted in this regard.

(viii) Any borrowing and/or creation of security for any borrowing by the Manager Group Members incorporated under the Companies Act, 1956 or the Companies Act, 2013, will be in accordance with the conditions prescribed therein.

The Investment Manager may secure the payment of any sum of money for and on behalf of the Manager Group Member in such manner and upon such terms and conditions in all respects as set out in the Annual Budget or the Business Plan, including by mortgage or pledge or charge upon all or any Trust Assets (present or future).

RELATED PARTY TRANSACTIONS

Under Regulation 2(1)(zv) of the InvIT Regulations, a 'related party' will be as defined under the Companies Act, 2013 or under the applicable accounting standards (i.e., Ind AS 24 on "Related Party Disclosures") and will also include (i) the Parties to the Trust and (ii) the promoters, directors and partners of the Parties to the Trust. Further, any transaction between the Trust and one or more infrastructure investment trusts having a common investment manager or sponsor, or a transaction where the Investment Manager or the Sponsor is an Associate of the investment manager or sponsor of the other infrastructure investment trust, will be deemed to be related party transactions for such parties. Also see "*Financial Statements*" on page 333.

A. Procedure for dealing with Related Party Transactions

General Requirements

In accordance with relevant provisions of the InvIT Regulations, all related party transactions will be on an arms' length basis, in compliance with applicable accounting standards and any other guidelines issued by the SEBI from time to time. Such related party transactions shall be in the best interest of the Unitholders, must be consistent with the strategy and investment objectives of the Trust and must be disclosed to the Stock Exchange in accordance with the requirements of the InvIT Regulations.

Approval of the Unitholders

In the case of related party transactions proposed to be entered into, if such related party transaction is a Reserved Matter, approval from Unitholders will be obtained such that the votes cast by Unitholders so entitled and voting in favor of a resolution are not less than one-and-a-half times the votes cast against such resolution, provided that if the InvIT Regulations specify a different threshold for the approval by Unitholders of such matter, the threshold specified in the InvIT Regulations will prevail. Further, if such related party transaction is a Reserved Matter and does not require the approval of the Unitholders to be obtained at a Unitholders meeting under the InvIT Regulations, then, a meeting of the Unitholders shall not be required if the prior approval in writing of the Unitholders holding at least 60% of the Unitholding of the Trust has been obtained by IRB in respect of such Reserved Matter. For details of the Reserved Matters, see "*Corporate Governance*" and "*Rights of Unitholders*" on pages 159 and 306, respectively.

Voting by any person who is a related party with respect to any transaction as well as the voting by the Associates of such person will not be considered on the specific issue.

Role of the Investment Manager

The Investment Manager is responsible for formulating and maintaining all such internal processes and relevant controls with respect to related party transactions, so as to ensure compliance with the InvIT Regulations and applicable accounting standards. Further, the Investment Manager will convene meetings of the Unitholders in accordance with Regulation 22 of the InvIT Regulations and maintain records pertaining to such meetings in the manner prescribed. The Investment Manager will also ensure compliance with any additional guidelines, circulars or regulations with respect to related party transactions issued by the SEBI or the stock exchanges in the future.

The Investment Manager or its Associates will not obtain any commission, rebate or any other remuneration, by whatever name called, arising out of transactions pertaining to the Trust, other than as specified in the relevant documents for any offering of Units or any other document as may be specified by the SEBI for the issue of Units.

Disclosure and Reporting

The Investment Manager will submit quarterly reports on the activities of the Trust, including the status of compliance with the requirements specified under the InvIT Regulations in relation to related party transactions to the Trustee within 30 days of the end of each quarter.

Further, in accordance with the InvIT Regulations, the Investment Manager will submit an annual report and a half-yearly report to the Trustee, the Unitholders and the stock exchanges, electronically or through physical copies within the timelines specified under the InvIT Regulations, which will contain, *inter-alia*, details of all related party transactions, including acquisitions or disposal of any projects, directly or through SPVs during the year, the value of which exceeded 5% of the value of the Trust Assets.

B. Details of Related Party Transactions undertaken prior to the filing of this Letter of Offer

The Trust (acting through the Trustee) has entered into, *inter-alia*, the following related party transactions prior to the filing of this Letter of Offer:

S. No.	Name of the Related Party	Nature of Relationship with the Trust	Nature of Transaction
1.	IRB Infrastructure Developers Limited	Sponsor	The Trust was settled with an initial settlement amount of ₹1,000.00 by the Sponsor.
2.	MMK Toll Road Private Limited	Investment Manager	The Trustee (acting on behalf of the Trust) has entered into the Investment Management Agreement dated August 27, 2019, as amended on September 16, 2019 and May 31, 2023, with the Investment Manager for managing and administering the Trust, in accordance with the InvIT Regulations. The Investment Manager will be paid Management Fees in accordance with the terms of the Investment Management Agreement. For details, see "*Background and Structure of the Trust – Fees and Expenses – Fees and expenses of the Investment Manager*" and "*The Investment Manager*" on pages 116 and 317, respectively.
3.	IRB Infrastructure Developers Limited	Project Manager	The Trustee (on behalf of the Trust) has entered into the Project Implementation Agreements with the Project Manager, with respect to each of the Project SPVs, which set out the obligations of the Project Manager with respect to the execution of each of the projects, in accordance with the InvIT Regulations. The Project Manager will be paid EPC Payments and O&M Payments, as applicable, by the respective Project SPVs in accordance with the terms of the Project Implementation Agreements. For details, see "*Background and Structure of the Trust – Fees and Expenses – Fees and expenses of the Project Manager*" and "*The Sponsor and Project Manager*" on pages 116 and 313, respectively.
4.	IRB Infrastructure Developers Limited	Sponsor	Pursuant to the Name Licensing Agreement dated February 13, 2020, as amended, the Sponsor has granted to the Trust, each of the Project SPVs and the Investment Manager, the non-transferable and non-assignable right to use the "IRB" trademark as part of their respective corporate names, if applicable, as well as the "IRB" logo in connection with their respective businesses, on a non-exclusive basis. No licensing fee is payable to the Sponsor under the Name Licensing Agreement.
5.	IRB Infrastructure Developers Limited and its Associates	Sponsor and its Associates	The Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL) were transferred to the Trust on February 25, 2020 by the Sponsor pursuant to the Formation Transactions undertaken as part of the initial offer through private placement of Units. The Subordinated Debt and Unsecured Loans were also novated in favor of the Trust. The Trust acquired PDTPL through subscription to 99.96% of the equity share capital of PDTPL on April 2, 2022. The Trust acquired IRB GEPL through subscription to 99.99% of the equity share capital of IRB GEPL on August 2, 2023. The Trust acquired STPL on December 28, 2023 and subscribed to 99.96% of the equity share capital of STPL on January 3, 2024.

For details of the related party transactions entered into by the Project SPVs during the nine-month period ended December 31, 2023 and the Financial Years 2023, 2022 and 2021, see "*Financial Statements*" on page 333.

C. Details of Related Party Transactions proposed to be undertaken

Pursuant to the terms of the Framework Agreement, the Sponsor has agreed that prior to the submission of a bid ("**Bid**") for (i) any new concession by the Sponsor and/or its affiliates involving the development or operation of roads and highways ("**New Projects**"); or (ii) over any extensions of the concession period of road projects held by the Sponsor and/or its affiliates (other than the Project SPVs) ("**Extension Projects**", and together with the New Projects, the "**Potential Projects**"), it will consult the Financial Investors in good faith and make best efforts to Bid for the Potential Project on behalf of the Trust on such terms as agreed between the Sponsor and the Financial Investors. If IRB and the Financial Investors are unable to reach an agreement in relation to the terms of the Bid within a reasonable period, the Sponsor will be free to submit a Bid subject to the terms of the Framework Agreement.

The proceeds of the Issue are proposed to be utilized for (i) subscribing to equity shares of IRB LTPL pursunat to IRB LTPL Share Subscription Agreement; (ii) providing loans to IRB LTPL pursuant to IRB LTPL Shareholder Loan Agreement; (iii) subscribing to equity shares of IRB GTPL pursunat to IRB GTPL Share Subscription Agreement; (iv) providing loans to IRB GTPL pursuant to IRB GTPL Shareholder Loan Agreement; (v) subscribing to equity shares of IRB KTPL pursunat to IRB KTPL Share Subscription Agreement; and (vi) providing loans to IRB KTPL pursuant to IRB KTPL Shareholder Loan Agreement. These are related party transactions under the InvIT Regulations.

The Project Manager is also proposed to be appointed as the project manager with respect to IRB GTPL, IRB KTPL and IRB LTPL pursuant to the IRB GTPL Project Imeplementation Agreement, the IRB KTPL Project Implementation Agreement and IRB LTPL Project Implementation Agrement, respectively.

Unitholder approval for such related party transactions has been obtained pursuant to a resolution dated February 6, 2024. Certain other agreements with related parties, including amendments to the Framework Agreement and the Name Licensing Agreement have also been executed. For further details, see "*Objects of the Issue*" and "*Background and Structure of the Trust – Investment in IRB LTPL, IRB GTPL and IRB KTPL*" on pages 69 and 103, respectively.

In order to conduct its business, the Trust may enter into transactions with related parties in the future, which will be carried out in compliance with the above policy for dealing with related party transactions, applicable accounting standards and the provisions of the InvIT Regulations.

D. Potential Conflicts of Interest

We may be subject to potential conflicts of interest arising out of our relationship with our Sponsor and its respective Associates, and we will enter into transactions with related parties in the future. Details in relation to our policies for dealing with related party transactions are provided above. Also see "*Risk Factors – Risks Related to the Trust's Relationships with the Sponsor and the Investment Manager*" on page 35.

While the Sponsor operates various road infrastructure projects and accordingly, has interests in road infrastructure assets apart from those of the Project SPVs, none of these other road infrastructure assets compete or are likely to compete, directly or indirectly, with the activities of the Trust. The Sponsor confirms that it shall perform its duty in relation to the Trust independent of its related business.

VALUATION

In relation to the valuation of the Portfolio of the Trust, the valuation report dated March 8, 2024 setting out the valuation of the Portfolio as of December 31, 2023 ("**Portfolio Valuation Report**"), is available on the website of the Trust at https://www.irbinfratrust.co.in/home/index.php/valuation-reports/. This is the last available valuation report for the Portfolio under the InvIT Regulations.

The Valuer has also undertaken valuations of the IRB LTPL, IRB GTPL and IRB KTPL as at January 31, 2024 and has issued a valuation report dated March 8, 2024 ("**TOT-12 and TOT-13 Valuation Reports**") which is included as "*Annexure B: TOT-12 and TOT-13 Valuation Reports*" on page B.

A. Summary of the Valuation and Valuation Methodology of the Portfolio (excluding IRB LTPL, IRB GTPL and IRB KTPL)

Valuation methodology

Basis of Value

The Valuer has performed valuation on the basis of "Fair Value" as at Valuation Date. The generally accepted definition of "Fair Value" is the value as applied between a hypothetical willing vendor and a hypothetical willing prudent buyer in an open market and with access to all relevant information.

Premise of Value

Valuer has adopted "Going Concern Value" as the premise of value in the given circumstances. The generally accepted definition of Going concern value is the value of a business enterprise that is expected to continue to operate in the future.

The Valuer has performed valuation as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issued by the Institute of Chartered Accountants of India. The Valuer has carried out valuation of portfolio of Trust as at 31 December 2023.

A brief description of generally accepted valuation methodologies considered by the Valuer are set out below:

<u>Income Approach</u>

<u>Discounted Cash Flows ("DCF")</u>

- Under a DCF approach, forecast cash flows are discounted back to the present date, generating a net present value for the cash flow stream of the business. A terminal value at the end of the explicit forecast period is then determined and that value is also discounted back to the valuation date to give an overall value for the business.
- A discounted cash flow methodology typically requires the forecast period to be of such a length to enable the business to achieve a stabilized level of earnings, or to be reflective of an entire operation cycle for more cyclical industries.
- The rate at which the future cash flows are discounted ("the discount rate") should reflect not only the time value of money, but also the risk associated with the business' future operations. The discount rate most generally employed is weighted average cost of capital ("WACC"), reflecting an optimal as opposed to actual financing structure.
- In calculating the terminal value, regard must be had to the business' potential for further growth beyond the explicit forecast period. The "constant growth model", which applies an expected constant level of growth to the cash flow forecast in the last year of the forecast period and assumes such growth is achieved in perpetuity, is a common method. These results would be cross-checked, however, for reasonability to implied exit multiples.
- Due to the finite life of the concession period of the Portfolio of the Trust, we have not computed a terminal value for the valuation of Portfolio of the Trust.
- The rate at which future cash flows are discounted should reflect not only the time value of the cash flows but also the risk associated with the business' future operations. This means that in order for a DCF to produce a sensible valuation figure, the importance of the quality of the underlying cash flow forecasts is fundamental.
- The DCF approach has been applied in the valuation of the Portfolio of the Trust.

Market Approach

Comparable Companies ("CoCo")

- Under comparable companies' method, the value of shares / business of a company is determined based on market multiples of publicly traded comparable companies. Although no two companies are entirely alike, the companies selected as comparable companies should be engaged in the same or a similar line of business as the subject company.
- The appropriate multiple is generally based on the performance of listed companies with similar business models and size.
- The CoCo methodology has not been applied in the valuation of Portfolio.
- The list of companies in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, comparable companies' method is not considered.

Comparable Transactions ("CoTrans")

- Under comparable transactions method, the value of shares / business of a company is determined based on market multiples of publicly disclosed transactions in the similar space as that of the subject company. Due to different purposes of investments, transaction rationale and synergy benefits, different control premiums and minority discounts are embedded in the transaction values.
- Multiples are generally based on data from recent transactions in a comparable sector, but with appropriate adjustment after consideration has been given to the specific characteristics of the business being valued.
- The list of transactions in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, Therefore, comparable transactions method has not been considered for the valuation of Portfolio of the Trust.

Market Price Method

- Under this approach, the value of the business is arrived at considering the market price of the company based on the daily moving averages of the last six-month volume traded weighted average of closing price on the stock exchange where the company's shares are most frequently traded.
- The market price methodology has not been considered in the valuation of Portfolio of Trust as individual SPVs of the Trust are not publicly listed or traded on any stock exchange.

Cost Approach

Net Asset Value ("NAV") Method

- Under the net asset value approach, total value is based on the sum of net asset value as recorded on the balance sheet.
- A net asset methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business.
- The net assets methodology has not been considered for the valuation of Portfolio of the Trust as the SPVs in the Portfolio are operational and the financials are made on a going concern basis.

Replacement Cost Method

- The replacement cost of a business is the cost of acquiring similar assets employed in the business and/or reaching a similar level of development. A purchaser, faced with a build versus buy scenario, may be prepared to pay significantly over and above this cost to obtain advantages including time saved in developing a similar business, and risk of failure.
- The replacement cost method quantifies the cost and risk to reach the present stage of development.
- This approach is often used for start-up/non-mature technology or biotech businesses.
- Hence, the replacement cost method has not been considered.

Market Value of Assets or Realizable Value

- Under the market value methodology, total value is based on the sum of market value of asset value less market value of liabilities plus, the value of intangible assets not recorded on the balance sheet.
- This methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business.
- Hence, the market value method has not been considered.

Valuation Summary

Valuation conclusion 31 December 2023	
INR Crore	
IRB Westcoast Tollway Limited	3,367
Solapur Yedeshi Tollway Limited	2,602
Yedeshi Aurangabad Tollway Limited	4,374
Kaithal Tollway Limited	2,342
AE Tollway Limited	3,460
Udaipur Tollway Limited	2,626
CG Tollway Limited	2,798
Kishangarh Gulabpura Tollway Limited	2,033
IRB Hapur Moradabad Tollway Limited	4,263
Palsit Dankuni Tollway Private Limited	1,640
IRB Golconda Expressway Private Limited	14,025
Samakhiyali Tollway Private Limited	365
Total Enterprise Value	**43,896**
Cash and cash Equivalents	69
Surplus	736
Proposed dividend	(288)
Debt	(17,390)
PV of standalone expense prtaining to InvIT	(224)
Capex creditors	(549)
Equity value of the Trust	**26,250**

NAV at fair value per unit as on 31 December 2023	
Equity Value of IRBI Trust (INR Cr)	26,250
Units outstanding (No.)	1,021,693,265
NAV at fair value per unit (INR)	**256.92**

Notes:

1. *Cash and cash equivalents comprise balance and deposits with banks as at 31December2023.*
2. *Surplus assets primarily comprise investment in mutual funds of INR 710 Cr and advance tax net of provisions of INR 18 Cr as at 31 December 2023.*
3. *IRBI Trust has declared distribution of INR 288 Cr in the month of January 2024 to its unitholders. Although the distribution liability is not part of the financial statements of the Trust as at Valuation Date, we have adjusted the proposed distribution of INR 288 Cr from the enterprise value of the SPVs, to arrive at equity value of IRBI Trust net of proposed distribution.*
4. *Debt and debt like items primarily represent loan from bank, financial institutions, related parties and non-convertible debentures as at 31 December 2023.*
5. *Present value of standalone expenses of the IRBI Trust represent the present value of the investment manager fee in the books of the IRBI Trust. The expenses have been forecasted to increase by 10% each year till 11 August 2053 (FY2054).*
6. *Capital creditors of INR 549 Cr have been considered debt like in nature and adjusted from the Enterprise Value to arrive at the Equity Value of the Trust. Management represented that they do not consider these liabilities as part of the working capital and thus they have not been considered as part of the forecast working capital.*
7. *We note that other financial liabilities of INR 3,749 Cr and sub-debt of INR 1,692 Cr is outstanding in the consolidated financials of the Trust is payable to IRB infrastructure Developers Limited as at 31 December 2023. These liabilities have not been considered as debt like in nature for the purpose of valuation analysis. We have been given to understand that SPV's have ongoing claims and litigations with NHAI for respective projects. The Trust and its SPV's have entered into a debt novation agreement with IRB infrastructure*

Developers Limited pursuant to which any amount received by SPVs or Trust towards these NHAI claims will be paid to IRB infrastructure Developers Limited. Management has also confirmed that these claims and liabilities have no financial impact on the SPVs or the IRBI Trust and the claim amounts from NHAI are significantly higher than the liabilities recognized by the Trust. Based on the above, Valuer has not considered any impact of these liabilities in their valuation analysis.

B. Summary of the Valuation and Valuation Methodology of IRB LTPL, IRB GTPL and IRB KTPL

Valuation methodology

Basis of Value

The Valuer has performed valuation on the basis of "Fair Value" as at Valuation Date. The generally accepted definition of "Fair Value" is the value as applied between a hypothetical willing vendor and a hypothetical willing prudent buyer in an open market and with access to all relevant information.

Premise of Value

Valuer has adopted "Going Concern Value" as the premise of value in the given circumstances. The generally accepted definition of Going concern value is the value of a business enterprise that is expected to continue to operate in the future.

The Valuer has performed valuation as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issued by the Institute of Chartered Accountants of India. The Valuer has carried out valuation of IRB LTPL, IRB GTPL and IRB KTPL as at 31 January 2024.

A brief description of generally accepted valuation methodologies considered by the Valuer are set out below:

<u>Income Approach</u>

<u>Discounted Cash Flows ("DCF")</u>

- Under a DCF approach, forecast cash flows are discounted back to the present date, generating a net present value for the cash flow stream of the business. A terminal value at the end of the explicit forecast period is then determined and that value is also discounted back to the valuation date to give an overall value for the business.
- A discounted cash flow methodology typically requires the forecast period to be of such a length to enable the business to achieve a stabilized level of earnings, or to be reflective of an entire operation cycle for more cyclical industries.
- The rate at which the future cash flows are discounted ("the discount rate") should reflect not only the time value of money, but also the risk associated with the business' future operations. The discount rate most generally employed is weighted average cost of capital ("WACC"), reflecting an optimal as opposed to actual financing structure.
- In calculating the terminal value, regard must be had to the business' potential for further growth beyond the explicit forecast period. The "constant growth model", which applies an expected constant level of growth to the cash flow forecast in the last year of the forecast period and assumes such growth is achieved in perpetuity, is a common method. These results would be cross-checked, however, for reasonability to implied exit multiples.
- Due to the finite life of the concession period of the Portfolio of the Trust, we have not computed a terminal value for the valuation of Portfolio of the Trust.
- The rate at which future cash flows are discounted should reflect not only the time value of the cash flows but also the risk associated with the business' future operations. This means that in order for a DCF to produce a sensible valuation figure, the importance of the quality of the underlying cash flow forecasts is fundamental.
- The DCF approach has been applied in the valuation of IRB LTPL, IRB GTPL and IRB KTPL.
- Under DCF Approach we have discounted Free Cash Flow to Firm to arrive at Enterprise Value of IRB LTPL, IRB GTPL and IRB KTPL as required by Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014

Market Approach

Comparable Companies ("CoCo")

- Under comparable companies' method, the value of shares / business of a company is determined based on market multiples of publicly traded comparable companies. Although no two companies are entirely alike, the companies selected as comparable companies should be engaged in the same or a similar line of business as the subject company.
- The appropriate multiple is generally based on the performance of listed companies with similar business models and size.
- The CoCo methodology has not been applied in the valuation of Portfolio.
- The list of companies in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, comparable companies' method is not considered.

Comparable Transactions ("CoTrans")

- Under comparable transactions method, the value of shares / business of a company is determined based on market multiples of publicly disclosed transactions in the similar space as that of the subject company. Due to different purposes of investments, transaction rationale and synergy benefits, different control premiums and minority discounts are embedded in the transaction values.
- Multiples are generally based on data from recent transactions in a comparable sector, but with appropriate adjustment after consideration has been given to the specific characteristics of the business being valued.
- The list of transactions in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, Therefore, comparable transactions method has not been considered for the valuation of IRB LTPL, IRB GTPL and IRB KTPL.

Market Price Method

- Under this approach, the value of the business is arrived at considering the market price of the company based on the daily moving averages of the last six-month volume traded weighted average of closing price on the stock exchange where the company's shares are most frequently traded.
- The market price methodology has not been considered in the valuation of IRB LTPL, IRB GTPL and IRB KTPL as IRB LTPL, IRB GTPL and IRB KTPL are not publicly listed or traded on any stock exchange.

Cost Approach

Net Asset Value ("NAV") Method

- Under the net asset value approach, total value is based on the sum of net asset value as recorded on the balance sheet.
- A net asset methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business.
- The net assets methodology has not been considered for the valuation of IRB LTPL, IRB GTPL and IRB KTPL as they are operational and the financials are made on a going concern basis.

Replacement Cost Method

- The replacement cost of a business is the cost of acquiring similar assets employed in the business and/or reaching a similar level of development. A purchaser, faced with a build versus buy scenario, may be prepared to pay significantly over and above this cost to obtain advantages including time saved in developing a similar business, and risk of failure.
- The replacement cost method quantifies the cost and risk to reach the present stage of development.
- This approach is often used for start-up/non-mature technology or biotech businesses.
- Hence, the replacement cost method has not been considered.

Market Value of Assets or Realizable Value

- Under the market value methodology, total value is based on the sum of market value of asset value less market value of liabilities plus, the value of intangible assets not recorded on the balance sheet.

- This methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business.
- Hence, the market value method has not been considered.

Valuation Summary

Valuation conclusion 31 January 2024			
INR Cr	**IRB ILTPL**	**IRB IKTPL**	**IRB IGTPL**
Present value of cash flows	222	149	90
Enterprise Value	**222**	**149**	**90**
Add: Net Cash / Debt	-	-	-
Equity Value	**222**	**149**	**90**

Notes:

1. *Management has informed Valuer that as at Valuation Date there are no material balances in the financial statements of IRB ILTPL, IRB IKTPL and IRB IGTPL. Valuer has relied on Management representation and have considered NIL assets and liabilities as on Valuation Date.*

C. Frequency of Valuation

In accordance with the InvIT Regulations, a full valuation of the Trust Assets (including physical inspection of each of the Trust's infrastructure projects) shall be conducted by the Valuer not less than once every financial year, and that such a full valuation shall be conducted at the end of each financial year, within two months from the end of such financial year. An updated valuation report taking into account any material developments during the previous half-year is also required to be issued by the Valuer as part of the half-yearly report to be submitted by the Investment Manager to the Trustee, the Unitholders and the Stock Exchange.

However, in case of any material development that may have an impact on the valuation of the Trust Assets, the Investment Manager will require the Valuer to undertake a full valuation of the infrastructure project under consideration, within not more than two months from the date of such event, and disclose the same to the Trustee within 15 days of such valuation. Any valuation reports received by the Investment Manager are required to be disclosed to the Stock Exchange within 15 days of receipt.

As a listed InvIT, in case the consolidated borrowings and deferred payments of the Trust are above 49% of the value of the Trust Assets, the valuation of the assets of the Trust is required to be conducted by the Valuer for the quarters ending June, September and December, for incorporating any key changes in the previous quarter and such quarterly reports are required to be prepared within one month of the end of such quarter.

D. Declaration of NAV

The Investment Manager will ensure that computation and declaration of NAV of the Trust is based on the valuation done by the Valuer, not later than 15 days from the date of valuation.

DISTRIBUTIONS

Distribution

Distributions shall be made by the Trust to the Unitholders, from time to time, in accordance with the Indenture of Trust and the InvIT Regulations. The Trustee shall make and shall ensure that the Investment Manager declares distributions on a quarterly basis. However, Unitholders should note that there is no assurance or guarantee that distributions will be made in any amount or at all.

The InvIT Regulations provide that not less than 90% of net distributable cash flows of each Project SPV, and any other SPV that may be acquired by the Trust, are required to be distributed to the Trust in proportion of its holding in each of the Project SPVs, and any other SPV that may be acquired by the Trust, subject to applicable provisions of the Companies Act. Further, not less than 90% of net distributable cash flows of the Trust shall be distributed to the Unitholders. Such distributions are required be declared and made not less than once every year and shall be made not later than 15 days from the date of such declaration.

In the event distributions are not made within 15 days of declaration, the Investment Manager shall pay interest at the rate of 15% per annum until the distribution is made to the Unitholders. Such interest is not and will not be recoverable by the Investment Manager from the Trust in the form of fees or any other charges payable by the Trust to the Investment Manager. Any amount remaining unclaimed or unpaid out of the distributions declared by the Trust shall be dealt with and transferred to the "Investor Protection and Education Fund" constituted by the SEBI, in the manner specified by the SEBI pursuant to its circular bearing reference number SEBI/HO/DDHS/DDHS-RAC-1/P/CIR/2023/178 dated November 8, 2023.

Distributions shall be made *pro rata* to the total subscription amount of a Unitholder and in accordance with the provisions of the Indenture of Trust, the InvIT Regulations, the Distribution Policy, the preliminary placement memorandum and the placement memorandum.

The Trust's distribution policy is to distribute as per the Trust's net distributable cash flows (the "**Net Distributable Cash Flows**"). The Trust's distribution policy is to distribute at least 90% of the Net Distributable Cash Flows of the Trust. Unless otherwise decided by the Unitholders, the Trust shall declare 100% of the Net Distributable Cash Flows as distributions to the Unitholders.

See "*Risk Factors*" on page 17 for a description of factors that may adversely affect the ability of the Trust to make distributions to Unitholders.

Distribution Policy of the Trust

In accordance with the InvIT Regulations, and the applicable guidelines, as may be issued by SEBI from time to time:

a) Each Project SPV, and any other SPV that may be acquired by the Trust, shall distribute its respective Net Distributable Cash Flows to the Trust, subject to the applicable provisions under Companies Act or any other applicable law, not less than once every three months; and

b) The Trust shall distribute at least 90% of the Net Distributable Cash Flows to the Unitholders not less than once every three months. Unless otheriwse decided by the Unitholders, the Trust shall declare 100% of the Net Distributable Cash Flows as distributions to the Unitholders.

The indicative framework for calculation of net distributable cash flows, as provided herein below, is subject to change, including pursuant to any amendments to the InvIT Regulations or by way of any circulars or guidelines issued by SEBI in this regard:

A. *Indicative Calculation of Net Distributable Cash Flows at a Standalone SPV Level*

S. No.	Description
1.	**Profit after tax as per profit and loss account (standalone) (A)**
2.	**Add:** Depreciation and amortisation as per profit and loss account
3.	**Add/less:** Loss/gain on sale of infrastructure assets
4.	**Add:** Proceeds from sale of infrastructure assets adjusted for the following:

	• related debts settled or due to be settled from sale proceeds • directly attributable transaction costs • proceeds reinvested or planned to be reinvested in accordance with Regulation 18 (7) (a) of the InvIT Regulations
5.	**Add:** Proceeds from sale of infrastructure assets not distributed pursuant to an earlier plan to re-invest, if such proceeds are not intended to be invested subsequently net of any profit/(loss) recognized in the P&L account
6.	**Add/less:** Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager, including but not limited to: • any decrease / increase in carrying amount of an asset or of a liability recognised in profit and loss • account on measurement of the asset or the liability at fair value; • interest cost as per effective interest rate method; • deferred tax; • reserve for major maintenance to the extent payments are not due in the next period; and • any other items charged / credited to the P&L account which do not involve corresponding cash flows
7.	**Less:** Repayment of external debt (principal) / redeemable preference shares / debentures
8.	**Less:** Any premium / negative grant payments to NHAI
9.	**Less:** Capital expenditure towards the project
10.	**Total Adjustments (B)**
11.	**Net Distributable Cash Flows (C)=(A+B)**

A minimum of 90% of the net distributable cash flows arrived at in (C) above shall be distributed by each Project SPV and any other SPVs that may be acquired in the future, to the Trust, subject to the applicable provisions of Companies Act/LLP Act or any other applicable laws, net of applicable taxes, if any, proportionate to the Trust's equity shareholding in such SPV.

B. *Indicative Calculation of Net Distributable Cash Flows at the Standalone Trust Level*

S. No.	Description
1.	Cash flows received from the Identified SPVs in the form of interest
2.	Cash flows received from the Identified SPVs in the form of dividend
3.	Any other income accruing at the Trust level and not captured above, including but not limited to interest / return on surplus cash invested by the Trust
4.	Cash flows received from the Identified SPVs towards the repayment of the debt issued to the Identified SPVs by the Trust
5.	Proceeds from the Identified SPVs for any capital reduction by way of buy back etc., subject to applicable laws
6.	Proceeds from sale of assets of the Identified SPVs not distributed pursuant to an earlier plan to re-invest, or if such proceeds are not intended to be invested subsequently
7.	**Total cash inflow at the Trust level (A)**
8.	**Less:** Any payment of fees, interest and expense incurred at the Trust level, including but not limited to the fees of the Investment Manager
9.	**Less:** Capital expenditure towards the Identified SPVs
10.	**Less:** Costs/retention associated with sale of assets of the project SPVs: • related debts settled or due to be settled from sale proceeds of Identified SPVs • transaction costs paid on sale of the assets of the Identified SPVs
11.	**Less:** Proceeds reinvested or planned to be reinvested in accordance with Regulation 18(7)(a) of the InvIT Regulations
12.	**Less:** Repayment of external debt at the Trust level
13.	**Less:** Income tax (if applicable) at the standalone Trust Level (including capital gains taxes on sale of assets / share in Identified SPVs / other investments)
14.	**Less:** Contribution towards maintaining minimum cash balance of INR 150,000,000 (Rupees One Hundred and Fifty Million) and/or such other reserve/minimum cash balance as agreed by Unitholders
15.	**Total cash outflows / retention at the Trust level (B)**
16.	**Net Distributable Cash Flows (C)=(A+B)**

A minimum of 90% of the Net Distributable Cash Flows arrived at in (C) above shall be distributed by the Trust to the Unitholders, subject to the applicable provisions of InvIT Regulations, net of applicable taxes, if any.

Distribution on Disposition

Subject to the InvIT Regulations, if (i) any asset is sold by the Trust or (ii) if the equity shares or interest in the Trust Assets are sold by the Trust then (a) if the Trust proposes to re-invest the sale proceeds into another infrastructure asset, it shall not be required to distribute any sale proceeds to the Trust or the Unitholders; but (b) if the Trust proposes not to invest the sales proceeds into any other infrastructure Assets, then such sales proceeds shall be regarded as Net Distributable Cash Flows and the Trust shall be required to distribute such proceeds in accordance with the Distribution Policy.

Distribution on Dissolution

In the event of dissolution or winding up of the Trust, all of the Trust Assets or the proceeds therefrom shall be distributed or used as follows and in the following order of priority:

a) First, towards the payment of the debts and liabilities of the Trust, including without limitation any fees, any amounts due to the Investment Manager, or the Project Manager and the expenses of liquidation;

b) Second, towards the setting up of any reserves which the Trustee, in consultation with the Investment Manager, or the authority in-charge of the dissolution of the Trust may deem reasonably necessary for any contingent or unforeseen liabilities or obligations of the Trust; and

c) Third, towards the Unitholders in accordance with the terms of the Distribution Policy, the Indenture of Trust, and applicable law.

In-specie Distribution

Subject to the provisions of applicable law and the Trust Documents, the Trustee, in consultation with the Investment Manager, may anytime during the life of the Trust make *in-specie* distributions of the Trust Assets.

History of Distributions

The Trust was listed on the NSE on April 3, 2023. Details of the distributions declared by the Trust since listing are set out below.

Particulars	For the Financial Year 2024	
	First Distribution	Second Distribution
Interest payment	₹449.55 million/₹0.44 per Unit	-
Return of capital	₹1,103.43 million/₹1.08 per Unit	₹2,881.18 million/₹2.82 per Unit

RIGHTS OF UNITHOLDERS

The rights and interests of the Unitholders are included in this Letter of Offer and the InvIT Regulations. Under the Indenture of Trust and the Investment Management Agreement, these rights and interests are safeguarded by the Trustee and the Investment Manager respectively. Any rights and interests of Unitholders as specified in this Letter of Offer would be deemed to be amended to the extent of any amendment to the InvIT Regulations.

Please note that nothing contained in this Letter of Offer (including any declarations provided by the directors of the Investment Manager) will relieve any party of its rights or obligations under the Framework Agreement and the IM SHA.

Beneficial Interest

Each Unit represents an undivided beneficial interest in the Trust. A Unitholder has no equitable or proprietary interest in the Trust Assets and is not entitled to transfer of the Trust Assets (or any part thereof) or any interest in the Trust Assets (or any part thereof). A Unitholder's right is limited to the right to require due administration of the Trust in accordance with the provisions of the Indenture of Trust and the Investment Management Agreement.

Ranking

No Unitholder of the Trust shall enjoy superior voting or any other rights over another Unitholder. Further, the Units shall not have multiple classes, except any subordinate Units that may be issued only to the Sponsor and its Associates, where such subordinate units carry only inferior voting or any other rights compared to other Units in the future, in accordance with Regulation 4(2)(h) of the InvIT Regulations.

Distribution

The Trustee shall ensure that the Investment Manager makes timely declaration of distributions to the Unitholders in accordance with the InvIT Regulations. If the distributions are not made within 15 days of declaration, then the Investment Manager shall be liable to pay interest to the Unitholders at the rate of 15% per annum till the distribution is made. The Investment Manager shall maintain records of the distributions declared and made to the Unitholders. For details, see "*Distributions*" on page 303.

Rights of Unitholders

Subject to the provisions of the InvIT Regulations, the Indenture of Trust, and applicable rules, regulations and guidelines, the rights of the Unitholders include:

a) right to receive income or distributions with respect to the Units held in accordance with the InvIT Regulations and in the manner set forth in the preliminary placement memorandum and the placement memorandum;

b) right to attend the annual general meeting and other meetings of the Unitholders of the Trust;

c) right to vote upon any matters/resolutions proposed in relation to the Trust;

d) right to receive periodic information having a bearing on the operation or performance of the Trust in accordance with the InvIT Regulations;

e) right to apply to the Trustee to take up certain issues at meetings for Unitholders approval; and

f) the right to appoint a nominee director on the Board, subject to the conditions specified under the InvIT Regulations.

Pre-emptive rights: In addition, the Investment Manager (on behalf of the Trust) will ensure that Unitholders will have the right to subscribe to their respective proportionate share of the proposed issue of Units at the same price to maintain their respective proportionate ownership in the Trust if the Trust proposes to issue any new units after the completion of the initial offer of Units to any person (except as contemplated in any business plan). The

Investment Manager and the Trustee will also ensure that Unitholders exercise their rights in relation to Reserved Matters and Events of Default.

For details of Reserved Matters, see "*Corporate Governance*" and "*– Approval of Unitholders*" on pages 159 and 308, respectively. For details of Events of Default, see "*– Arrangements between the Sponsor and the Financial Investors*" below.

The Trustee shall hold the Trust Assets in the name of the Trust for the benefit of the Unitholders in accordance with the Indenture of Trust and the InvIT Regulations and shall oversee the activities of the Investment Manager in the interest of the Unitholders. All related party transactions shall be on an arms' length basis in accordance with the relevant accounting standards, and in the best interests of the Unitholders. Further, the Trustee shall maintain records relating to the notices and agenda sent to the Unitholders for meetings held and the disclosures made to the Unitholders.

The rights given by the Sponsor to the Financial Investors will be made available to any new Unitholder that acquires Units of the Trust. Pursuant to a letter dated February 28, 2023, the SEBI has permitted *inter-se* rights among the existing Unitholders of the Trust to continue post-Listing, provided that such rights are extended to all Unitholders other than the Sponsor and its Associates post-Listing.

Arrangements between the Sponsor and the Financial Investors

In addition to the rights set out above, pursuant to the Framework Agreement, the Sponsor and the Financial Investors have agreed to certain *inter-se* arrangements in relation to their Unitholding in the Trust. Upon the completion of the Cintra Transaction, certain arrangements will also include Cintra as a Financial Investor. Key terms of such arrangements are set out below:

Put option: The Financial Investors had the right to require the Sponsor to purchase the Units held by them in the Trust upon the occurrence of certain events within the period of 12 months from the date of allotment in the initial offer of Units.

Right of first offer: The Financial Investors have a right of first offer over Units proposed to be transferred by the Sponsor to any person other than the subsidiaries of the Sponsor. Upon the completion of the Cintra Transaction, each of the Unitholders shall have a right of first offer over Units proposed to be transferred by any Unitholder, on such terms and conditions as set out in the Framework Agreement.

Tag along right: If the Sponsor proposes to transfer the Units held by it to a third party buyer (which is not a subsidiary of the Sponsor), the Financial Investors have a right to require such buyer to purchase from the Financial Investors, (i) the entire Unitholding of the Financial Investors, if the Sponsor proposes to transfer in excess of 20% of the total outstanding Units or (ii) up to such percentage of Units held by the Financial Investors that are *pro rata* to the percentage of Units proposed to be transferred by the Sponsor if the Sponsor proposes to transfer 20% or less of the total outstanding Units.

Reserved Matters: See "*– Approval of Unitholders*" below.

Encumbrances on the Sponsor's Units: The Sponsor is restricted from creating any encumbrances on its Units until the expiry of five years from the date of allotment of Units in the initial offer of Units. However, the Sponsor can pledge up to a certain percentage of its Units in favor of permitted lenders, the Financial Investors or their affiliates subject to certain conditions as agreed between the Sponsor and the Financial Investors.

Transfer of Units by the Sponsor: The Sponsor will only sell its Units to a person that is willing to be bound by the existing arrangements between Sponsor and the Financial Investors.

Event of Default and Consequences

The Financial Investors have the right to call an event of default ("**Event of Default**") under the Framework Agreement under certain circumstances.

If an Event of Default is declared by the Financial Investors:

- *Credit of distributions into an escrow account controlled by the Investment Manager*: The Sponsor and the Investors will cause any distributions that are to be made to them to be credited into the escrow account. The Trustee and the Investment Manager will ensure compliance with obligations in relation to distributions under Regulation 18(6) of the InvIT Regulations.

- *Operations of the Trust*: Other than operating in the ordinary course of business, no action shall be taken by any Manager Group Member in relation to the operations and business of the Trust without the unanimous consent of the Unitholders. However, if the InvIT Regulations specify a different threshold for the approval by Unitholders of such matter, the threshold specified in the InvIT Regulations will be followed instead of the unanimous consent requirement. If the Financial Investors vote against a resolution on any such matter for which a different threshold is specified under the InvIT Regulations, the Sponsor has agreed that it will also vote against the resolution on such matter.

The Sponsor may elect to dispute the event of default notice within a specified time period. If the Sponsor does not dispute such notice or the dispute is decided in favour of the Financial Investors:

- *Default call option and default put option*: The Financial Investors will have the right to require (i) the Sponsor to sell its Unitholding to them or (ii) the Sponsor to purchase the Investors' Unitholding in accordance with the conditions specified in the Framework Agreement.

- *Right to cause the Sponsor to take actions*: The Financial Investors will have the right to require the Sponsor to require the Trustee to call for a meeting of the Unitholders for change of the investment manager and the project manager. The Sponsor will vote in favor of the appointment of any entity proposed by the Financial Investors as the new investment manager of the Trust as per the InvIT Regulations. The Sponsor and its affiliates will forfeit all their rights under the transaction documents. This will not impact any responsibilities of the Sponsor under the InvIT Regulations.

- *Resolution of dispute relating to an Event of Default*: Upon the resolution of the dispute relating to the event of default, the distributions in the escrow account will immediately be released to the relevant party, i.e., Sponsor and Financial Investors. The party (against whom the dispute has been resolved unfavorably) shall be required to pay interest to the other party on the distributions credited to the escrow account for the delayed period.

Meetings of Unitholders

Subject to the provisions of the IM SHA, the Investment Manager shall convene meetings of the Unitholders in accordance with Regulation 22 of the InvIT Regulations, including at the written request of the Unitholders as specified therein, and maintain records pertaining to the meetings in accordance with Regulation 26 of the InvIT Regulations.

A Unitholder may be present at and may vote at any Unitholders' meeting in person, electronically, by proxy or attorney or by a duly authorized representative, and any such proxy, attorney or representative shall be counted for the purposes of constituting a quorum, to the extent permissible under applicable law. Voting on all matters to be considered at a Unitholders meeting shall be by poll, in proportion of the Units held by each Unitholder. Each Unit shall carry one vote. The Unitholders shall be entitled to participate, be counted towards quorum and vote in Unitholders' meetings by e-voting, postal ballot or any other means, subject to applicable law.

Approval of Unitholders

The Investment Manager and the Trustee are required to ensure that no resolution is passed in respect of any of the Reserved Matters without the approval of Unitholders such that the votes cast by Unitholders so entitled and voting in favor of the resolution are not less than one-and-a-half times the votes cast against such resolution at a validly convened Unitholders meeting (i.e., Unitholders holding at least 60% of the Unitholding of the Trust), provided that if the InvIT Regulations specify a different threshold for approval by Unitholders of any Reserved Matter, the threshold specified in the InvIT Regulations will prevail. If the Financial Investors vote against a resolution on a Reserved Matter for which the InvIT Regulations specify an approval threshold below 60%, the Sponsor has agreed that it will also vote against the resolution on such matter. If a Reserved Matter does not require the approval of the Unitholders to be obtained at a Unitholders meeting under the InvIT Regulations, then, a meeting of the Unitholders shall not be required if the prior approval in writing of the Unitholders holding at least 60% of the Unitholding of the Trust has been obtained by IRB in respect of such Reserved Matter. Upon the completion of the Cintra Transaction, the written consent of equity shareholders holding a certain agreed percentage of the equity shareholding will be required, depending on whether the relevant matter is an Ordinary Reserved Matter (as specified in the IM SHA) or a Special Reserved Matter (as specified in the IM SHA).

After the allotment of Units pursuant to the initial offer of Units, where any act under any Trust Document requires a 'consultation with the Trustee' or involves the exercise of powers by the Trustee which have not or cannot be delegated to the Investment Manager, then the performance of such act shall be deemed to include the obligation to obtain the approval of the Unitholders such that the votes cast by Unitholders so entitled and voting in favor of the resolution are not less than one-and-a-half times the votes cast against such resolution.

The limits in relation to the aggregate consolidated borrowings and deferred payments of the Trust and its Project SPVs, net of cash and cash equivalents (which includes investments in overnight mutual funds, characterized by their investments in overnight securities, having maturity of one day), shall be up to 70% of the Trust Assets. Also see *"Leverage"* on page 284 for details of the leverage policy of the Trust.

Reserved Matters

Certain Reserved Matters relating to the operations of the Trust, the Investment Manager, the Project SPVs and any other Manager Group Members which would require the approval of the board of directors, shareholders and Unitholders of the relevant entities, as applicable, have been identified and agreed under the Framework Agreement and the IM SHA. Such Reserved Matters include, *inter-alia*, matters in relation to:

- changes to the capital structure of any Manager Group Member;
- amendments to the charter documents of any Manager Group Member;
- listing of any Manager Group Member;
- approval of annual budgets and business plans;
- acquisition or divestment of road assets by the Trust;
- replacement or removal of certain managerial personnel;
- distributions in deviation from the Distribution Policy;
- indebtedness and encumbrances of assets of any Manager Group Member;
- amendment or termination of material contracts;
- major transactions;
- accounting and tax matters; and
- litigation and delegation of authority.

Upon the completion of the Cintra Transaction, the reserved matters listed above will be classified into Ordinary Reserved Matters (as specified in the IM SHA) and Special Reserved Matters (as specified in the IM SHA).

Also see "*Corporate Governance – Reserved Matters*" on page 160.

Matters for Approval under the InvIT Regulations

Under the InvIT Regulations, with respect to any matter requiring approval of the Unitholders:

a) a resolution shall be considered as passed when the votes cast by Unitholders, so entitled and voting, in favor of the resolution exceed a certain percentage (as specified in InvIT Regulations) of votes cast against;

b) the voting may also be done by postal ballot or electronic mode;

c) a notice of not less than 21 days (or such other time period specified under the InvIT Regulations) shall be provided to the Unitholders; and

d) voting by any person who is a related party in such transaction as well as the voting by any Associates of such person(s), shall not be considered on the specific issue.

The Investment Manager shall be responsible for all the activities relating to conducting of a meeting of the Unitholders, subject to the Trustee's oversight. However, in accordance with Regulation 22(2) of the InvIT Regulations, the Trustee shall convene and handle all activities relating to the conduct of the meetings in respect of issues relating to the Investment Manager, such as change, removal or change in control of the Investment

Manager. Further, in respect of issues pertaining to the Trustee, including any change in the Trustee, the Trustee shall not be involved in any manner in the conduct of the meetings of the Unitholders.

Under the InvIT Regulations, approval from the Unitholders shall be required where the votes cast in favor of the resolution shall be more than the votes cast against the resolution, with respect to the resolutions of the Unitholders on, *inter-alia*, the following matters:

a) any approval from the unitholders required in terms of Regulation 18 (Investment Conditions and Dividend Policy), Regulation 19 (Related Party Transactions), and Regulation 21 (Valuation of Assets) of the InvIT Regulations, to the extent applicable;

b) any transaction, other than borrowing, the value of which is equal to or greater than the threshold prescribed under the InvIT Regulations (currently 25% of the Trust Assets);

c) any issue of Units after the initial offer by the Trust, in whatever form, other than any issue of Units which is considered by the SEBI under Regulation 22(5) of the InvIT Regulations;

d) increasing period for compliance with investment conditions to one year in accordance with Regulation 18(5)(c) of the InvIT Regulations;

e) any issue, which in the ordinary course of business, in the opinion of the Sponsor, the Trustee or the Investment Manager, is material and requires approval of the Unitholders;

f) declassification of the status of a sponsor;

g) any issue for which the SEBI or the stock exchanges require the approval of the Unitholders under Regulation 22(4) of the InvIT Regulations; and

h) any issue taken up at an annual meeting of the Unitholders under Regulation 22(3) of the InvIT Regulations, which requires approval of the Unitholders other than as specified in Regulation 22(6) of the InvIT Regulations.

Under the InvIT Regulations, approval from the Unitholders shall be required where the votes cast in favor of the resolution shall not be less than one and a half times the votes cast against the resolution, with respect to the resolutions of the Unitholders on, *inter-alia*, the following matters:

a) any change in the Investment Manager, including removal or change in control of the Investment Manager;

b) any material change in the investment strategy of the Trust or its management fees;

c) the Trustee and the Investment Manager proposing to seek delisting of the Units of the Trust under Regulation 17(1)(e) of the InvIT Regulations;

d) any issue, not in the ordinary course of business, which in the opinion of the Sponsor, the Investment Manager or the Trustee, requires approval of the Unitholders;

e) any issue for which SEBI or the stock exchanges require the approval of the Unitholders under Regulation 22(5) of the InvIT Regulations;

f) any issue taken up at the request of the Unitholders, including:

    i) removal of the Investment Manager, and the appointment of another investment manager to the Trust;

    ii) removal of the Auditor, and appointment of another auditor with respect to the Trust;

    iii) removal of the Valuer, and appointment of another valuer with respect to the Trust;

    iv) delisting of the Trust, if the Unitholders have sufficient reason to believe that such delisting would act in their interest;

v) any issue which the Unitholders have sufficient reason to believe is detrimental to their interest; or

vi) a change in the Trustee if the Unitholders have sufficient reason to believe that the acts of the Trustee are detrimental to their interests.

In relation to any issue taken up at the request of the Unitholders as described above, the Trustee will require the Investment Manager to place the issue for voting in the manner specified in the InvIT Regulations on receipt of such applications.

Redressal of Grievances

The Investment Manager shall ensure adequate and timely redressal of all Unitholders' grievances pertaining to the activities of the Trust, and the Trustee shall periodically review the status of Unitholders' complaints and their redressal undertaken by the Investment Manager. The Investment Manager shall maintain records of the Unitholders' grievances and the actions taken thereon, including copies of correspondences made with the Unitholders. The Trust has obtained authentication on the SEBI Complaints Redress System (SCORES).

All claims, differences or disputes between investors and the Investment Manager arising out of or in relation to the activities of the Investment Manager in the securities market shall be submitted to a resolution mechanism that includes mediation and/or conciliation and/or arbitration, in accordance with the procedure specified by the SEBI pursuant to the Master Circular for Online Resolution of Disputes in the Indian Securities Market dated July 31, 2023 issued by the SEBI, as amended, to the extent applicable.

No loss or damage or expenses incurred by the Investment Manager or officers of the Investment Manager, including those in relation to resolution of claims or disputes of investors, shall be met out of the Trust property.

Limitation of the Liability of the Unitholders

The liability of each Unitholder towards the payment of any amount (that may arise in relation to the Trust including any taxes, duties, fines, levies, liabilities, costs or expenses) shall be limited only to the extent of the Capital Contribution of such Unitholder and after such capital contribution shall have been paid in full by the Unitholder, the Unitholder shall not be obligated to make any further payments.

Periodic Information and Disclosures

The Investment Manager shall submit an annual report to all Unitholders and the stock exchanges, electronically or by physical copies. In addition, the Investment Manager shall submit a half-yearly report, and if the Trust's consolidated borrowings and deferred payments in terms of Regulation 20 of the InvIT Regulations is above 49%, a quarterly report and valuation report to the stock exchanges.

The Investment Manager shall disclose to the stock exchanges any information having bearing on the operation or performance of the Trust as well as price sensitive information which includes, but is not restricted to the following:

a) acquisition or disposal of any projects, directly or through a holdco or SPV, the value of which exceeds 5% of the value of the Trust Assets;

b) additional borrowing, at level of holdco or SPV or the Trust, exceeding 15% of value of the Trust assets;

c) additional issue of Units by the Trust;

d) details of any credit rating obtained by the Trust and any change in such rating;

e) any issue which requires the approval of the Unitholders;

f) any legal proceedings which may have significant bearing on the functioning of the Trust;

g) notices and results of meetings of the Unitholders;

h) any instance of non-compliance with the InvIT Regulations, including any breach of limits specified under the InvIT Regulations; and

i) any material issue that, in the opinion of the Investment Manager or Trustee, needs to be disclosed to the Unitholders.

The Investment Manager (on behalf of the Trust) shall submit such information to the Unitholders and the Designated Stock Exchange on a periodic basis as may be required under the InvIT Regulations and applicable law, including an annual secretarial compliance report and the quarterly report on corporate governance compliance. Further, the Investment Manager (on behalf of the Trust) shall disclose to the Unitholders, the Designated Stock Exchange and SEBI, all such information, in the manner as may be specified by SEBI. For details of the responsibilities of the Investment Manager in relation to making periodic disclosures with respect to the valuation of the Trust Assets and the computation and declaration of NAV of the Trust, see "*Valuation*" on page 297.

SECTION V – PARTIES TO THE TRUST

THE SPONSOR AND PROJECT MANAGER

The Sponsor of the Trust is IRB Infrastructure Developers Limited. The Sponsor has settled the Trust pursuant to the Indenture of Trust dated August 27, 2019, as amended, and has appointed the Trustee in accordance with the provisions of the InvIT Regulations.

The Sponsor has also been appointed as the Project Manager pursuant to the Project Implementation Agreements.

The details of the Sponsor, Sponsor Group and Project Manager are as follows:

A. Details of the Sponsor and Project Manager

a) **Name:** IRB Infrastructure Developers Limited;

b) **Registered Office:** Off No-11th Floor/1101, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India;

c) **Correspondence Address:** Off No-11th Floor/1101, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India;

d) **Telephone Number:** +91 22 6640 4220;

e) **Website:** www.irb.co.in

f) **E-mail:** info@irb.co.in

B. Details of the Contact Person of the Sponsor

a) **Name:** Mr. Mehul Patel;

b) **Telephone Number:** +91 22 6640 4220; and

c) **E-mail:** mehul.patel@irb.co.in

C. Background and Past Experience of the Sponsor and Project Manager

The Sponsor is one of the largest infrastructure development and construction companies in India in terms of net worth in the roads and highways sector according to the NHAI's annual prequalification for public private partnerships in national highway projects report for 2016. As at December 31, 2023, the Sponsor had six road projects of which two were operational and four were under-construction.

The Sponsor also acts as the Project Manager. The Sponsor's BOT project portfolio includes the Ahmedabad Vadodara section of NH 8 and the Ahmedabad Vadodara Expressway and the Meerut Budaun (Group-I) section of Ganga Expressway. The Sponsor's HAM project portfolio includes the under construction Gandeva to Ena project on the Vadodara-Mumbai eight lane expressway, four-laning of Punjab/Himachal Border to Mo Section of NH-154 and the six-laning of Chittoor Thachur road. The Sponsor's TOT project includes the Yashwantrao Chavan Expressway (Mumbai Pune Expressway) and Mumbai – Pune section of NH-48 (old NH-4). The Sponsor has experience in developing road and highway infrastructure and has received various industry awards and recognitions. The Sponsor has experience in developing road and highway infrastructure and has received various industry awards and recognitions.

The Sponsor/Project Manager has experience in the execution of construction work for roads, highways, and other relevant structures and had a track record of constructing over 18,000 Lane Kilometres of roads and highways as of December 31, 2023.

The Sponsor is listed on the Stock Exchanges with a market capitalization of ₹370.19 billion as at March 7, 2024. As at March 31, 2023, the Sponsor has a consolidated networth of ₹133.79 billion. The Sponsor recorded a consolidated turnover of ₹67.03 billion in the Financial Year 2023 with a profit after tax of ₹7.2 billion.

D. Sponsor Group

The Sponsor/Project Manager, IRB Holding Private Limited, Virendra D. Mhaiskar, Deepali V. Mhaiskar and Virendra D. Mhaiskar (HUF) form the Sponsor Group.

E. Other Confirmations

In accordance with the eligibility criteria specified under the InvIT Regulations, the Sponsor had a net worth of ₹89.53 billion as on March 31, 2023, on a standalone basis. As on March 31, 2023, the Sponsor had a consolidated net worth of ₹133.79 billion. The Sponsor has an experience of more than 20 years as a developer in the infrastructure sector.

Further, none of the members of the Sponsor Group or their respective promoters or directors:

a) is debarred from accessing the securities market by the SEBI; or

b) is a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust which is debarred from accessing the capital market under any order or directions made by the SEBI.

None of the promoters or directors of any of the members of the Sponsor Group is a fugitive economic offender declared under Section 12 of the Fugitive Economic Offenders Act, 2018.

F. Details of the Holding or the Proposed Holding by Sponsor and the Sponsor Group in the Trust

The Sponsor currently holds 51.02% of the units of the Trust. The Sponsor has undertaken to subscribe to its entire Rights Entitlement in the Issue and proposes to subscribe to additional Units in the Issue such that its maximum post-Issue unitholding is 51.02%.

G. Summary of the Consolidated Financial Statements of the Sponsor

For a summary of the financial statements of the Sponsor, as derived from the consolidated financial statements of the Sponsor, prepared in accordance with Ind AS and the Companies Act, as of and for the Financial Years 2023, 2022 and 2021, see "*Summary Financial Statements*" on page 56.

H. Functions, Duties and Responsibilities of the Project Manager

The Project Manager has agreed to provide professional services to carry out engineering, procurement, construction, operations and maintenance of the Project SPVs, including making arrangements for the appropriate maintenance, either directly or through sub-contractors, in accordance with the terms and conditions of the relevant project agreements, the InvIT Regulations, other applicable law and good industry practice (the "**Works**"). CGTL, IRB HMTL, KGTL, IRB WTL and UTL have also executed addenda dated May 6, 2021 to their respective Project Implementation Agreements, in connection with the payment of certain additional costs to the Project Manager. IRB GEPL has entered into a project implementation agreement dated August 2, 2023 with the Project Manager for the provision of initial upgradation works and operation and maintenance works for the project operated by IRB GEPL. STPL has entered into a project implementation agreement dated October 12, 2023 with the Project Manager for the provision of the Works for its project.

Under the terms of the Project Implementation Agreements, the Project Manager is required to, *inter-alia*, provide the following Works:

a. engineering, procurement and construction works in relation to the project as required under the project agreements;

b. operations and maintenance for the project as stipulated under the project agreements, including tolling, which shall include procuring, operating and maintaining the toll management system at its toll plazas, including employing staff for toll collection, security arrangements at toll plazas and printing of toll tickets;

c. any and all activities required to be performed by the Project SPVs pursuant to the project agreements or pursuant to any communication from NHAI or any other governmental authority, including in relation to shifting of utilities, associated roads, felling of trees and related works with respect to the project site or any work to be undertaken pursuant to a change of scope order based on a determination of change of scope by the NHAI under the relevant concession agreement; and

d. other administrative services such as software usage support services, information technology support services, support services for legal matters, support services for accounting and tax matters, support services for general administration and investor relations, and support services and payroll and related services.

The Project Manager may engage duly qualified third-party service providers including but not limited to architects, surveyors and technical consultants for provision of the Works. If more than 50% of the Works are sub-contracted to any person other than Modern Road Makers Private Limited or any other affiliate of the Project Manager, then such sub-contract will be subject to prior approval of the Investment Manager (as confirmed by Unitholders of the Trust).

The Project Manager will inform the Investment Manager about any transactions between the Project Manager and its Associates which may involve a conflict of interest and where the Project Manager has advised that there may be a conflict of interest, and will obtain confirmation from the practicing chartered accountant or the valuer, as applicable, that such transaction is on an arms' length basis.

The Project Manager will ensure that it provides a compliance certificate to the Investment Manager and the Trustee on a quarterly basis or such other intervals as required in accordance with the InvIT Regulations with a copy to the Financial Investors.

The Project Manager has confirmed that it will provide the Works to the Project SPVs on a most preferred basis and if the Project Manager offers same or similar works to any person on better terms than offered to a Project SPV, then the Project SPV will be automatically entitled to the such better terms, and the Project Manager will ensure that the such better terms are forthwith made applicable to the Project SPV.

The Project Manager has also agreed to indemnify the Investment Manager, the Project SPVs and their respective officers, directors, shareholders, partners, members and employees subject to the terms, conditions and limitations specified in the Project Implementation Agreements.

The Project Implementation Agreements are valid for an initial period of 10 years. The Project Implementation Agreements may be terminated by the Investment Manager, *inter-alia*, with prior written notice of a specified period, provided that such right shall not be exercisable by the Investment Manager until the later of (i) the completion of the first major maintenance cycle in relation to the first Project SPV that undergoes a major maintenance cycle; or (ii) the commencement of the fifth year of the initial term. The above right of termination shall be exercisable by the Investment Manager collectively in relation to all the Project Implementation Agreements and not selectively in relation to one or more (but less than all) Project Implementation Agreements, provided that selective termination in respect of a Project SPV shall be permitted if (a) the Project Implementation is terminated pursuant to the other provisions of the agreement; or (b) if the Project SPV is undergoing a major maintenance or the construction period or any EPC Work, in which case, unless otherwise required by the Investment Manager for such Project SPV, the other Project Implementation Agreements shall stand terminated. The Investment Manager shall obtain approvals from the Unitholders and any governmental authority as may be applicable, in relation to such termination.

The Investment Manager also has the right to terminate the Project Implementation Agreements by issuing a notice of termination in case of certain events, including breach of the agreement by the Project Manager and the breach is not remedied within 60 days, occurrence of an Event of Default under the Framework Agreement, change in control of the Project Manager, occurrence of an insolvency event in relation to the Project Manager or a force majeure event continues for a period of 180 days or more within a continuous period of 365 days.

IRB LTPL, IRB GTPL and IRB KTPL have entered into the IRB LTPL Project Implementation Agreement, the IRB GTPL Project Implementation Agreement and the IRB KTPL Project Implementation Agreement, respectively. The effective date of such project implementation agreements will be the date of closing under (i) the IRB LTPL Share Subscription Agreement for the IRB LTPL Project Implementation Agreement; (ii) the IRB GTPL Share Subscription Agreement for the IRB GTPL Project Implementation Agreement; and (iii) the IRB KTPL Share Subscription Agreement for the IRB KTPL Project Implementation Agreement.

Also see "*Background and Structure of the Trust – Fees and Expenses – Fees and expenses of the Project Manager*" on page 116.

THE INVESTMENT MANAGER

MMK Toll Road Private Limited is the Investment Manager of the Trust, and has been designated as such pursuant to the Investment Management Agreement. The Investment Manager is responsible for making investment decisions with respect to the underlying assets or projects of the Trust, including any further investment or divestment of its assets, in accordance with the InvIT Regulations and the Investment Management Agreement.

The details of the Invesment Manager are as follows:

A. Details of the Investment Manager

a) **Name:** MMK Toll Road Private Limited;

b) **Registered Office:** Off No-11th Floor/1101, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India;

c) **Correspondence Address:** Off No-11th Floor/1101, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India;

d) **Telephone Number:** +91 22 6733 6400; and

e) **E-mail:** dhananjay.joshi@irb.co.in

B. Details of the Contact Person of the Investment Manager

a) **Name:** Mr. Dhananjay Joshi;

b) **Telephone Number:** +91 22 6733 6400; and

c) **Email:** dhananjay.joshi@irb.co.in

C. Background and Past Experience of the Investment Manager

MMK Toll Road Private Limited ("**Investment Manager**") was incorporated on April 12, 2002. The Investment Manager has experience in operating a road BOT project for a period of 13 years and in developing, operating and maintaining toll roads in the infrastructure sector.

The Investment Manager has executed the BOT project of improving and strengthening the Mohol – Kurul – Kamti – Mandrup Road in Solapur District (length: 33 km). The cost of the project was ₹180 million, which was financed by equity of ₹70.00 million and rupee term loan of ₹110.00 million. The commercial operations date of the project was in May 2002 and the concession period was 13 years which expired in May 2015.

Being part of the IRB group, the Investment Manager has the infrastructure for acting as the Investment Manager for managing the assets and investments of the Trust.

The net worth of the Investment Manager as on December 31, 2023 stood at ₹104.40 million on a standalone basis. The key managerial personnel of the Investment Manager have over five years of experience each, in providing advisory services to a developer in the infrastructure sector. One such key managerial personnel has experience of over five years in the roads sector which is the relevant sub-sector in which the Trust primarily proposes to invest.

The Investment Manager confirms that it has, and undertakes to ensure that it will at all times maintain, adequate infrastructure, personnel and resources to perform its functions, duties and responsibilities with respect to the management of the Trust, in accordance with the InvIT Regulations, the Investment Management Agreement and other applicable law.

Further, neither the Investment Manager, nor its promoters or directors:

a) is debarred from accessing the securities market by the SEBI; or

b) is a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust or infrastructure investment trust which is debarred from accessing the capital market under any order or directions made by the SEBI.

None of the promoters or directors of the Investment Manager is a fugitive economic offender declared under Section 12 of the Fugitive Economic Offenders Act, 2018.

The Investment Manager conducts the operations of the Trust from its offices in Mumbai and New Delhi.

D. Brief Profiles of the Investment Manager's Directors

a) **Mr. Virendra D. Mhaiskar**

Mr. Virendra D. Mhaiskar, is a non-independent director of the Investment Manager. He holds a Diploma in Civil Engineering from Shriram Polytechnic, Navi Mumbai. Mr. Mhaiskar has over 30 years of experience in the construction and infrastructure industry. He joined the IRB group in June 1990 and is responsible for leading and directing the IRB group's strategy in BOT and funded projects.

b) **Mr. Kunnasagaran Chinniah**

Mr. Kunnasagaran Chinniah is a non-independent director of the Investment Manager. He is a Chartered Financial Analyst with a bachelor's degree in electrical engineering from the National University of Singapore and an MBA from the University of California, Berkeley. He has more than three decades of experience in the financial and infrastructure sectors. He is presently a director of Sembcorp Industries Limited, Changi Airport International, Azalea Asset Management, Capitaland Ascendas REIT, Hindu Endowments Board, Singapore and several other companies. Earlier, he retired as the Managing Director/Global Head of Portfolio, Strategy & Risk group and Head of Infrastructure with GIC Special Investments ("**GICSI**"), the Private Equity arm of the Government of Singapore Investment Corporation ("**GIC**"). He joined GIC in 1989 and has held various positions with the Special Investments Department of GIC in their North American, European and Asian regions.

c) **Mr. Boon Chin Hau**

Mr. Boon Chin Hau is an non-independent director of the Investment Manager. He is the Managing Director, Head, Asia & Emerging Markets, Infrastructure - GIC Infrastructure Group. He joined the GIC Infrastructure Group in 2008. He has degrees from Imperial College London and the University of Chicago.

d) **Mr. Aryan Mhaiskar**

Mr. Aryan Mhaiskar is an non-independent director of the Investment Manager. He holds a bachelors degree of science in economics and finance. He is associated with Avener Capital as a senior analyst. He was a management intern with IRB Infrastructure Developers Limited. Presently, he is associated with ADVent Partners LLP as a designated partner. He is an FIDE-rated international chess player and provides chess coaching to underprivileged children. He is also involved in animal welfare initiatives.

e) **Mr. K G Krishnamurthy**

Mr. K.G. Krishnamurthy, is an independent director of the Investment Manager. He was the Managing Director and CEO of HDFC Property Ventures Limited. He holds a degree in Bachelor of Architecture from Indian Institute of Technology Kharagpur. He was associated with Housing Development Finance Corporation ("**HDFC**") for more than two decades and held various leadership positions during his tenure with HDFC. He was also deputed to HDFC Venture Capital Limited (a subsidiary of HDFC) as Managing Director and CEO in the year 2005.

f) **Mrs. Ranjana Paranjape**

Mrs. Ranjana Paranjape, is an independent director of the Investment Manager. She holds a Diploma in Financial Management and a master's degree of Commerce from the University of Mumbai. She is also a Certified Associate of the Indian Institute of Bankers. She was associated with IDBI Bank for over 38 years and retired in October 2016 as a Chief General Manager.

g) **Mr. Nagendraa Parakh**

Mr. Nagendraa Parakh is an independent director of the Investment Manager. He is a rank holder chartered accountant and company secretary by professional qualification having more than 36 years of varied experiences. He retired as an executive director of the SEBI in October 2022. He played a key role in in development and regulation of securities and commodities markets. He was instrumental in introduction of equity derivatives markets, T+2 Rolling settlements and derivatives risk management system. He was exposed to many other departments including regulation of intermediaries like brokers, depository participants, credit ratings agencies, debenture trustees etc, and also worked extensively for Investor education and protection. He was also instrumental in introduction of pledge-repledge system to deposit client's margin in form of securities and resolution of defaults by Brokers. He was appointed as a Member of the Forward Market Commission during July 2012 to September 2015. He has also represented SEBI on various committees, international forums and on councils of exchanges and clearing corporations.

h) **Mr. Amyn Jassani**

Mr. Amyn Jassani is an independent director of the Investment Manager and has over 30 years of experience in accounting and audit services. He is a fellow member of the Institute of Chartered Accountants of India. He also holds memberships of the Institute of Company Secretaries of India and the Institute of Social Auditors of India. Additionally, he has passed examinations for Certified Information System Auditor (CISA).

The directors are not directors or members of the governing board of an investment manager of another infrastructure investment trust.

E. Brief Profiles of the Investment Manager's Key Personnel

a) **Mr. Dhananjay K. Joshi, Chief Executive Officer**

Mr. Dhananjay K. Joshi, 50 years, joined the IRB group in November 1998. He was appointed as the Chief Executive Officer of MMK Toll Road Private Limited with effect from February 10, 2020. He holds a bachelor's degree in commerce and a bachelor's degree in law from the University of Mumbai. He also holds a post-graduate diploma in business management and a masters in business administration from Shivaji University, Kolhapur. He has been a part of the IRB group for over 22 years.

b) **Ms. Shilpa C. Todankar, Chief Financial Officer**

Ms. Shilpa C. Todankar, 40 years, joined the IRB group in September 2009. She is a member of the Institute of Chartered Accountants of India since 2011. She holds a diploma in Information System Audit from Institute of Chartered Accountants of India. She has more than 10 years of experience in the fields of accountancy, audit and taxation in the IRB group. She is also a director on the board of the Project SPVs.

c) **Mr. Kaustubh Shevade, Company Secretary and Compliance Officer**

Mr. Kaustubh Shevade, 37 years, joined the IRB group in December 2019. He is an associate member of the Institute of Company Secretaries of India. He holds a bachelor of legal sciences degree and a bachelor of laws degree from the University of Mumbai. He also holds a master of business laws degree from the National Law School of India University, Bengaluru. Prior to joining the Investment Manager, he was associated with Tata Realty and Infrastructure Limited and Reliance Infrastructure Limited.

F. Details of the Holding or the Proposed Holding by the Investment Manager and its Directors in the Trust

The Investment Manager and its directors do not hold any Units as on date. None of the directors of the Investment Manager or the Investment Manager propose to hold any Units in the Trust.

G. Summary of the Standalone Financial Statements of the Investment Manager

For a summary of the financial statements of the Investment Manager, as derived from the standalone financial statements of the Investment Manager, prepared in accordance with Ind AS and the Companies Act, as of and for the Financial Years 2023, 2022 and 2021, see "*Summary Financial Statements*" on page 61.

H. Functions, Duties and Responsibilities of the Investment Manager

Below is the brief description of the functions, duties and responsibilities of the Investment Manager provided in the Investment Management Agreement in accordance with the InvIT Regulations, which *inter-alia,* include:

a) Coordinating with the Trustee, as may be necessary, with respect to the operations of the Trust.

b) Ensuring that the valuation of the Trust Assets is done by the Valuer in accordance with the InvIT Regulations.

c) Arranging for adequate insurance coverage for the Trust Assets in accordance with the InvIT Regulations.

d) Maintaining proper books of accounts, documents and records with respect to the Trust, in the manner set out in the Indenture of Trust and in accordance with Applicable Law.

e) Ensuring that the audit of the accounts of the Trust by the Auditor is undertaken in accordance with the InvIT Regulations.

f) Making Distributions to Unitholders in accordance with Regulations 9(8) and 18 of the InvIT Regulations, the Trust Documents and the Investment Strategy. Subject to the Trust Documents, Applicable Law and the Investment Strategy, at least such percentage of the net distributable cash flows of the SPVs and Holdcos (as applicable) shall be distributed to the InvIT, as prescribed in the InvIT Regulations. The Distributions shall be made not less than once every year or at such other intervals as may be specified in the relevant Trust Documents or applicable under the InvIT Regulations;

g) To convene meetings of the Unitholders in accordance with Regulation 22 of the InvIT Regulations, including at the written request of the Unitholders as specified therein, and maintain records pertaining to the meetings in accordance with Regulation 26 of the InvIT Regulations.

h) To intimate the Trustee prior to any change in control of the Investment Manager to enable the Trustee to seek prior approval from the Unitholders (and the SEBI or any other governmental authority, if applicable) and ensuring that no such change is given effect to, until the approval of the Unitholders (and the SEBI or any other governmental authority, as applicable) has been obtained, or the Investemnt Management Agreement is terminated and a new investment manager has been appointed in accordance with the terms in the Investment Management Agreement, or in compliance with any other requirement under the InvIT Regulations, other applicable law and the Trust Documents.

i) To place before the board of directors, a report on the activity and performance of the Trust in accordance with the InvIT Regulations. To designate an appropriately qualified employee to act as the compliance officer for monitoring of compliance with the InvIT Regulations and any circulars or guidelines issued thereunder and intimating the SEBI in case of non-compliance.

j) Maintaining records pertaining to the activity of the Trust in terms of Regulation 26 of the InvIT Regulations.

k) To manage the Trust in accordance with applicable law (including the InvIT Regulations) and the Trust Documents and the investment strategy, to make all investment decisions with respect to the Trust Assets and ensure that the investments made by the Trust are in accordance with the investment conditions specified in the applicable provisions of the InvIT Regulations and in accordance with the investment strategy as specified in the Investment Management Agreement.

l) To appoint, in consultation with the Trustee, the Valuer, Auditor (for a period of not more than five consecutive years or such other period as may be prescribed under the InvIT Regulations), regsitrar and transfer agent, merchant bankers, custodians, credit rating agencies, and any other intermediaries or service providers.

m) To ensure all activities of the intermediaries, agents, or service providers appointed by the Investment Manager are in accordance with the InvIT Regulations and guidelines and circulars issued thereunder, as applicable.

n) Overseeing the activities of the Project Manager, ensuring that the Project Manager conplies with the InvIT Regulations, and reviewing the transactions carried out between the Project Manager and its Associates and where the Project Manager has advised that there may be a conflict of interest, to obtain confirmation from a practicing chartered accountant or valuer, as applicable, that such transaction is on an arms' length basis.

o) To ensure adequate and timely redressal of Unitholders' grievances pertaining to the activities of the Trust in accordance with the InvIT Regulations. The Investment Manager is required to submit quarterly reports on Unitholders' grievances to the Trustee, as applicable.

p) To provide to the SEBI, the stock exchanges and other governmental authorities, as applicable, information as may be requested or required under applicable law by the SEBI, the stock exchanges or other governmental authorities, as applicable, in relation to the activities of the Trust

q) To ensure that disclosures and reporting to the Unitholders, SEBI, the Trustee, and the stock exchanges are in accordance with the applicable provisions of the InvIT Regulations (including disclosure to the Trustee and the Unitholders of any information having a bearing on the operation or performance of the Trust) in accordance with the timelines specified in the InvIT Regulations.

r) To intimate the Trustee and the Unitholders on the occurrence of any event that may have a material impact on the Investment Manager and its ability to perform its obligations under the Trust Documents, including any change in control of the Investment Manager.

s) To be responsible for all activities pertaining to the issue of Units including filing of any placement memorandum, final placement memorandum, draft offer document, offer document or final offer document with the SEBI and dealing with all matters relating to the allotment of Units to Unitholders.

t) To ensure that disclosures in the placement memorandum or offer document are material, true, correct and adequate and in accordance with the InvIT Regulations. The Trust may list its Units on one or more stock exchanges subject to compliance with the conditions specified under the InvIT Regulations and directions issued by the SEBI or the stock exchanges, as applicable.

u) Fulfiling its obligations under the applicable provisions of the InvIT Regulations and the Trust Documents.

v) The Investment Manager is required to submit to the Trustee:

   i. quarterly reports on the activities of the Trust including receipts for all funds received by it and for all payments made, status of compliance with the InvIT Regulations, specifically

Regulations 18, 19 and 20 of the InvIT Regulations, performance report, status of development of under-construction projects, within time period specified under the InvIT Regulations, whichever is earlier;

ii. valuation reports as required under the InvIT Regulations within the time period specified under the InvIT Regulations;

iii. decision to acquire or sell or develop or bid for any Trust Asset or project or expand existing completed Trust Assets or projects along with rationale for the same;

iv. details of any action which requires approval from the Unitholders as may be required under the InvIT Regulations; and

v. details of any other material fact including change in its directors, change in its shareholding, any legal proceedings that may have a significant bearing on the activity of the Trust, within the time period specified under the InvIT Regulations.

w) To submit within the time period prescribed under the InvIT Regulations, annual reports and half yearly reports to all the Unitholders electronically or provide physical copies and, if applicable, to the stock exchanges.

x) To keep segregated at all times the assets and liabilities of the Trust from the assets and liabilities of the Investment Manager and the assets and liabilities of any other trusts managed by the Investment Manager. The assets held under the Trust shall be held for the exclusive benefit of the Unitholders and such assets shall not be subject to the claims of any creditor or any person claiming under any other fund or trust administered or managed by the Investment Manager.

y) To be responsible for monitoring, administering and giving effect to all claims and adjustments arising out of the share purchase agreements executed in respect of the acquisition of Trust Assets and any payments required to be made by or to the Trust.

z) Other duties include:

i. ensuring that computation of the net asset value of the Trust is based on the valuation done by the Valuer in accordance with the InvIT Regulations;

ii. maintaining regular interaction with the Trustee on performance of the Trust and providing the Trustee with any information in relation to the operations of the Trust as may be required;

iii. conducting its affairs and the affairs of the Trust in such a manner that Unitholders will not have personal liability with respect to liabilities or obligations of the Trust;

iv. collecting all dividends, fees, property and other payments due and receivable by the Trust in the manner set out in the Indenture and in terms of the InvIT Regulations;

v. ensuring that no commission or rebate or any other remuneration, arising out of transaction pertaining to the Trust is collected by the Investment Manager or its Associates, other than as specified in the offer document or any other document as may be specified by SEBI for the purpose of the issue of the units of the Trust;

vi. ensuring that the Trust Assets have proper and legal marketable titles and that all the material contracts entered into or on behalf of the Trust or the Trust Assets or the SPVs, or the Holdcos are legal, valid, binding and enforceable by and on behalf of the Trust or the Trust Assets or the SPVs or the Holdcos, as applicable;

vii. keeping the Unitholders informed and updated on investment activities of the Trust in accordance with the Trust Documents;

viii. ensuring that any possible conflict of interest involving its role as an Investment Manager is reported to the Trustee and the Unitholders;

ix. ensuring that disclosures and reporting to the Unitholders, SEBI and the Trustee are in accordance with applicable law and InvIT Regulations;

x. to immediately notify the Trustee and the Unitholders of any act which is detrimental to the interest of the Unitholders;

xi. informing the Trustee and Unitholders in writing about any change in the representations and warranties provided by the Investment Manager under the Investment Management Agreement or any of the Trust Documents;

xii. providing assistance to the Trustee as may be required in fulfilling its obligations towards the Trustee and the Unitholders, under applicable law, by any governmental authority or under the Trust Documents;

xiii. providing to the SEBI, the Trustee and if applicable, the stock exchanges, such information as may be sought by the SEBI, the Trustee or the stock exchanges in relation to the activities of the Trust, and providing, in parallel, to the Unitholders a copy of all reports and submissions made hereunder;

xiv. taking any other actions incidental to any of the foregoing or necessary or convenient in order to fully effect or evidence any action or transaction contemplated under the Investment Management Agreement; and

xv. to perform any other duties specified in the InvIT Regulations and the Trust Documents.

I. Rights in relation to shareholding in the Investment Manager

Pursuant to the terms of the IM SHA, the Sponsor and Croxley have agreed to the following arrangements in relation to their shareholding in the Investment Manager:

- ***Put option***: Croxley had the right to require the Sponsor to purchase the equity shares held by it in the Investment Manager upon the occurrence of certain events within the period of 12 months from the date of allotment in the initial offer of Units.

- ***Right of first refusal***: Croxley has a right of first refusal over equity shares of the Investment Manager proposed to be transferred by the Sponsor to any person other than the subsidiaries of the Sponsor.

- ***Tag along right***: Subject to lock-in below, if the Sponsor proposes to transfer equity shares of the Investment Manager held by it to a third party buyer (which is not a subsidiary of the Sponsor), Croxley has a right to require such buyer to purchase from the Investors, (i) the entire shareholding of Croxley if the Sponsor proposes to transfer in excess of 20% of the total outstanding equity shares or (ii) up to such percentage of equity shares held by Croxley that is *pro rata* to the percentage of equity shares proposed to be transferred by the Sponsor if the Sponsor proposes to transfer 20% or less of the total outstanding equity shares.

- ***Lock-in***: The Sponsor is not permitted to transfer the equity shares held by in the Investment Manager to any person, including to its affiliates without the prior written permission of Croxley.

- ***Deed of Adherence***: The Sponsor has agreed that any transfer of its shareholding to any person will be valid only if such person executes a deed of adherence and agrees to be bound by the terms and conditions of the IM SHA.

- ***Pre-emptive rights***: If the Investment Manager proposes to issue any new equity shares to any person including an existing shareholder, including by way of a preferential allotment, subject to certain exceptions specified in the IM SHA, then until the date of completion of any initial public offering of the Investment Manager, the Investment Manager will provide a right to the existing shareholders to subscribe to their respective proportionate share (in the proportion of their shareholding in the Investment Manager) of such proposed issuance at the same price as is offered to the proposed recipient, so as to maintain their respective proportionate ownership in the Investment Manager.

- ***Events of Default and consequences***: See "*Rights of Unitholders – Arrangements between the Sponsor and the Financial Investors*" on page 307.

Croxley and the Investment Manager have entered into a share purchase agreement dated March 14, 2024 with the Cintra IM Investor for the purchase of 24% of the equity shares of the Investment Manager by the Cintra IM Investor from Croxley, in connection with the Cintra Transaction. Closing of the Cintra Transaction is subject to the receipt of requisite regulatory approvals. Upon completion of the Cintra Transaction, the above rights available to Croxley shall also be available to the Cintra IM Investor in accordance with the terms of the IM SHA.

THE TRUSTEE

The Sponsor has settled the Trust pursuant to the Indenture of Trust and appointed IDBI Trusteeship Services Limited in accordance with the provisions of the InvIT Regulations.

The details of the Trustee are as follows:

A. Details of the Trustee

a) **Name:** IDBI Trusteeship Services Limited;

b) **Registered Office:** Ground Floor, Universal Insurance Building, Sir Phirozshah Mehta Road, Fort, Mumbai – 400001;

c) **Telephone Number:** +91 22 4080 7000;

d) **Fax Number:** +91 22 6631 1776

B. Details of the Contact Persons of the Trustee

Ms. Sheetal Mehta
+91 22 4080 7062
sheetal@idbitrustee.com

Mr. Munjal G. Dhanani
+91 22 4080 7060
munjal@idbitrustee.com

C. Details of Trustee's Registration with SEBI

The Trustee is registered with SEBI as a debenture trustee with registration number IND000000460.

D. Background of the Trustee

The Trustee is a trusteeship company which has been registered with SEBI, and has been jointly promoted by IDBI Bank Limited, Life Insurance Corporation and General Insurance Corporation for providing corporate and other trusteeship services.

The Trustee is permitted to engage in the following activities.

a) Debenture / bond trustee;

b) Security trustee/ facility agent;

c) Securitization trustee;

d) Share pledge trustee / share monitoring agent;

e) Escrow agent;

f) VCF trustees/ AIF Trustees;

g) Safe keeping / lockers services;

h) Management of private trusts / execution of wills; and

i) Special corporate services (e.g. provision of nominee directors)

The Trustee is the one of the largest trusteeship companies in India. The Trustee provides trusteeship services to corporates across diverse industries as well as domestic and foreign banks and financial institutions.

The Trustee is not an Associate of the Sponsor/Project Manager or the Investment Manager. Further, the Trustee is not and has not been (i) not debarred from accessing the securities market by the SEBI; or (ii) a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust or infrastructure investment trust which is debarred from accessing the capital market under any order or directions made by the SEBI.

None of the promoters or directors of the Trustee are or have been (i) declared as a fugitive economic offender under Section 12 of the Fugitive Economic Offenders Act, 2018; (ii) debarred from accessing the securities market by SEBI; (iii) a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust or an infrastructure investment trust which is debarred from accessing the capital market under any order or direction made by SEBI; and/or (iv) declared a wilful defaulter by any bank or financial institution or consortium thereof in accordance with the guidelines on wilful defaulters issued by the Reserve Bank of India.

E. Names and Profiles of the Directors of the Trustee

The names and profiles of board of directors of the Trustee, are as follows:

S. No.	Name	Designation	DIN
1.	Mr. Pradeep Kumar Jain	Director	07829987
2.	Mr. Pradeep Kumar Malhotra	Managing Director and Chief Executive Officer	09817764
3.	Ms. Jayashree Ranade	Director	09320683
4.	Ms. Baljinder Kaur Mandal	Director	06652016
5.	Mr. Jayakumar S. Pillai	Director and Chairman	10041362

The Trustee confirms that it has, and undertakes to ensure that it will at all times maintain, adequate infrastructure, personnel and resources to perform its functions, duties and responsibilities with respect to the Trust, in accordance with the InvIT Regulations, the Indenture of Trust and applicable law.

F. Functions, Duties and Responsibilities of the Trustee

a) Interests of the Unitholders

The Trustee shall carry on and conduct its business in a proper and efficient manner in the best interest of the Unitholders in accordance with the Trust Documents. The Trustee shall duly perform all its duties, responsibilities and powers as set out in the InvIT Regulations in the interest of the Unitholders and in accordance with the provisions of the Trust Documents.

b) Appointment of the Investment Manager, the Project Manager and enter into the Investment Management Agreement and the Project Implementation Agreements

The Trustee, on behalf of the Trust, shall within a reasonable time from the date of execution of the Indenture of Trust, appoint an Investment Manager and a Project Manager (in consultation with the Investment Manager) and enter into an Investment Management Agreement and the Project Implementation Agreements. The Trustee shall have the power to execute the Project Implementation Agreement or any other agreement or arrangement, from time to time, with the Project Manager, any holding company or the SPV in this regard. The Trustee shall obtain a compliance certificate from the Investment Manager and the Project Manager on a quarterly basis, or such other time and in the form as may be prescribed under the InvIT Regulations.

c) Supervision of the Investment Manager

i. The Trustee shall ensure that the Investment Manager complies with reporting and disclosure requirements in accordance with the InvIT Regulations and in case of any delay or discrepancy, the Trustee shall require the Investment Manager to rectify such delay or discrepancy on an urgent basis.

ii. The Trustee shall oversee the activities of the Investment Manager in the interest of the Unitholders, ensure that the Investment Manager complies with the applicable provisions of the InvIT Regulations, including in relation to reporting and disclosure requirements and shall obtain a compliance certificate from the Investment Manager on a quarterly basis.

iii. The Trustee shall review transactions between the Investment Manager and its Associates and where the Investment Manager has advised that there may be a conflict of interest, obtain a confirmation that such transaction is on an arm's length basis from a practicing chartered account, a valuer or as may be otherwise prescribed under the InvIT Regulations, as applicable.

iv. The Trustee shall ensure that the Investment Manager reviews the valuation reports issued by the valuer and submitted to the Trustee by the Investment Manager in accordance with the InvIT Regulations.

v. The Trustee shall require the Investment Manager to set up such systems and procedures and submit such reports to the Trustee, as may be necessary for effective monitoring of the functioning of the Trust.

vi. The Trustee shall ensure that the Investment Manager convenes meetings of the Unitholders in accordance with the InvIT Regulations and oversees voting by the Unitholders and declaration of results (except where the Trustee is required to carry out such functions under the InvIT Regulations). The Trustee shall ensure that the Investment Manager convenes meetings of Unitholders within the period prescribed under the InvIT Regulations and the period between such meetings shall not exceed the period prescribed under the InvIT Regulations.

d) Providing information to the SEBI

The Trustee shall ensure that the Investment Manager shall provide to the SEBI and other governmental authorities, as applicable, information as may be requested or required under applicable law by the SEBI or other governmental authorities, as applicable, in relation to the activities of the Trust. The Trustee shall comply with the information and intimation requirements under the InvIT Regulations. The Trustee shall ensure that the activity of the Trust is operated in accordance with the provisions of the Indenture of Trust, the InvIT Regulations, other applicable law and the Trust Documents.

e) Documents and information to be provided to Unitholders

The Trustee shall, and shall ensure that the Investment Manager shall, provide documents and information to the Unitholders with respect to the activities carried on by the Trust, as may be required by the SEBI or other governmental authority, as applicable, under applicable law.

f) Change in Control

The Trustee shall obtain approvals, if required under the Trust Documents, the InvIT Regulations, other applicable law and any concession agreement, for any proposed change in control of the Trustee, the Investment Manager or the Project Manager, as applicable.

g) Change in Investment Manager or Project Manager

In the event of any proposed change or termination in the investment manager or project manager, the Trustee shall ensure that all conditions in connection with the removal of such investment manager or project manager and appointment of a new investment manager or project manager prescribed under the InvIT Regulations, the Trust Documents and other applicable law are complied with. The previous investment manager or project manager shall continue to act as such at the discretion of the Trustee until such time as the new investment manager or project manager is appointed. The Trustee shall ensure that the new investment manager or project manager shall stand substituted as a party in all the documents (to the extent applicable) to which the earlier investment manager or project manager was a party. The Trustee shall also ensure that the earlier investment manager or project manager continues to be liable for all its acts of omissions and commissions for the period during which it served as investment manager or project manager, notwithstanding its change or termination.

h) Subscription amounts

The Trustee shall and shall ensure that the Investment Manager ensures that subscription amounts in case of any offering by the Trust (including the Issue) are collected and utilized in accordance with the InvIT Regulations, the relevant Trust Documents and conditions specified by the SEBI, as applicable.

i) Distribution

The Trustee shall make Distributions and ensure that the Investment Manager makes timely declarations of Distributions to the Unitholders in accordance with the InvIT Regulations.

j) Maintenance of books of accounts and other records

The Trustee shall cause the books of accounts and other records of the Trust to be maintained in accordance with the Indenture of Trust, the Trust Documents and applicable law.

k) Payment of statutory charges, operation of bank accounts etc.

i. The Trustee shall ensure that the Investment Manager shall make payments of all taxes, duties and any other statutory charges or levies that may be payable by the Trust or on behalf of the Unitholders from the Trust Assets, subject to the provisions of the Trust Documents and applicable law.

ii. The Trustee shall be responsible for opening and operating bank accounts and demat accounts on behalf of the Trust.

l) Attainment of objects of the Trust

The Trustee shall ensure that all acts, deeds and things are done for the fulfilment of the investment objectives of the Trust in accordance with the InvIT Regulations, the Trust Documents and to secure the best interests of the Unitholders.

m) Reports to be filed by the Trust

The Trustee shall file such reports as may be required by the SEBI or any other governmental authority or as required under applicable law in relation to the activities carried on by the Trust.

n) Unitholder Complaints

The Trustee shall periodically review the status of Unitholders' complaints and their redressal by the Investment Manager. The Investment Manager shall provide quarterly reports on Unitholders' grievances to the Trustee, as applicable.

o) Segregation of assets and liabilities

The assets and liabilities of the Trust shall at all times be segregated from the assets and liabilities of the Trustee and the assets and liabilities of other trusts managed by the Trustee. The Trust Assets shall be held for the exclusive benefit of the Unitholders and such assets shall not be subject to the claims of any creditor or any Person claiming under any other fund or trust administered or managed by the Trustee or the Investment Manager.

p) Valuer

i. The Trustee shall ensure that the valuer is not an Associate of the Sponsor, the Investment Manager or the Trustee.

ii. The Trustee shall ensure that the Investment Manager ensures that a detailed valuation is undertaken of the Trust Assets by the valuer at such intervals and in the manner specified under the InvIT Regulations and the Trust Documents.

iii. The Trustee shall ensure that the remuneration of the valuer is not linked to or based on the value of the asset being valued.

q) Investment by Trustee

The Trustee shall invest in Units only if permitted under Applicable Law and such investments shall be in accordance with applicable law.

r) Compliance with the InvIT Regulations

The Trustee shall fulfil its obligations under applicable provisions of the InvIT Regulations.

s) Delegation to the Investment Manager

The Trustee shall delegate all such powers to the Investment Manager as may be required by the Investment Manager to carry out its obligations under the Investment Management Agreement and Applicable Law and as may be required for the benefit of the Unitholders. Also see "*Rights of Unitholders – Approval of Unitholders*"on page 308.

t) Related Party Transactions

The Trustee shall review the transactions carried out between the Investment Manager and its Associates and obtain a certificate from a practising chartered accountant or a valuer, as applicable with respect to any related party transactions involving the Investment Manager and its Associates, where the Investment Manager has advised that there may be a conflict of interest, stating that such transactions have been done at an arms-length basis.

u) Monitoring

The Trustee shall require the Investment Manager to set up such systems and procedures and submit such reports to the Trustee, as may be necessary for the effective monitoring or the functioning of the Trust. The Trustee shall oversee activities of the Investment Manager in the interest of the Unitholders, shall ensure that the Investment Manager is in compliance with the provisions of the InvIT Regulations at all times and shall obtain a compliance certificate from the Investment Manager on a quarterly basis. Further, the Trustee shall ensure that the Investment Manager complies with reporting and disclosure requirements in accordance with the InvIT Regulations and in case of any delay or discrepancy, the Trustee will ensure that the Investment Manager rectifies such delay or discrepancy on an urgent basis.

v) **Unitholders Meeting**

The Trustee shall ensure that the Investment Manager convenes meetings of the Unitholders in accordance with the InvIT Regulations and shall also oversee the voting by the Unitholders and the declaration of results (excpet where the Trustee is required to carry out such functions under the InvIt Regulations). The Trustee shall ensure that the Investment Manager convenes meetings of Unitholders within the period prescribed under the InvIT Regulations and the period between such meetings shall not exceed the period prescribed under the InvIT Regulations.

w) **Others**

The Trustee shall ensure that the activity of the Trust is operated in accordance with the Indenture of Trust, InvIT Regulations, other applicable law and the Trust Documents. In the event, any discrepancy is noticed by the Trustee, then the Trustee shall promptly inform the SEBI in writing. The Trustee shall provide to the SEBI such information as may be sought by the SEBI pertaining to the activity of the Trust.

The Trustee shall have the power to take up with SEBI or with the stock exchanges, as applicable, any matter which has been approved in any meeting of Unitholders post the initial offer by the Trust, if the matter requires such action.

x) **Compliance Certificate**

The Trustee shall obtain a compliance certificate in the form and manner prescribed under applicable law on a quarterly basis, from each of the Investment Manager and the Project Manager.

SECTION VI – OTHER PARTIES

AUDITORS

The Investment Manager, in consultation with the Trustee, and pursuant to the approval of the Unitholders, has appointed Gokhale & Sathe, Chartered Accountants and M S K A & Associates, Chartered Accountants as the Trust's Auditors until the conclusion of the ninth annual meeting of Unitholders of the Trust. The Auditors have audited the Consolidated Financial Statements and their reports thereon have been included in this Letter of Offer.

Policy for Appointment of Auditor

The Investment Manager shall appoint an auditor of the Trust to hold office from the date of conclusion of the annual meeting in which the auditor is appointed until the date of conclusion of the sixth annual meeting of the unitholders thereafter in accordance with the procedure for selection of auditors as may be specified by the SEBI. The Investment Manager is not permitted to appoint or re-appoint an individual as the auditor for more than one term of five consecutive years, and an audit firm as the auditor for more than two terms of five consecutive years, subject to a cooling-off period of five years. With respect to the appointment of the auditor of the Trust and the fees of such an auditor, an approval from the Unitholders shall be required at the annual meeting in accordance with Regulation 22 of the InvIT Regulations.

The Investment Manager shall ensure that the auditor carries out an audit of the accounts of the Trust at such intervals as may be required under the InvIT Regulations.

In accordance with the InvIT Regulations, the auditor of the Trust shall:

a) conduct an audit of the accounts of the Trust and draft the audit report based on the accounts examined, after taking into account the relevant accounting and auditing standards, as may be specified by SEBI in this regard;

b) to the best of its information and knowledge, ensure that the accounts and financial statements give a true and fair view of the state of the affairs of the Trust, including profit or loss and cash flow for the period and such other matters as may be specified;

c) have a right of access at all times to the books of accounts and vouchers pertaining to activities of the Trust;

d) have a right to require such information and explanation pertaining to activities of the Trust, as it may consider necessary for the performance of its duties as auditor from the employees of Trust or the Sponsor, the Investment Manager, the Project Manager or the Trustee or the SPVs or any other person in possession of such information; and

e) undertake a limited review of the audit of all the entities or companies whose accounts are to be consolidated with the accounts of the Trust as per the applicable Indian Accounting Standards (Ind AS) and any addendum thereto as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, in such manner as may be specified by the SEBI.

Auditing Standards

The Auditor shall conduct an audit of the accounts of the Trust and issue the audit report based on the accounts examined, after taking into account the relevant accounting and auditing standards, as may be specified by SEBI and/or the ICAI, from time to time, in this regard. Further, the Auditor shall undertake a limited review of the audit of all the entities or companies whose accounts are to be consolidated with the accounts of the Trust, in accordance with the relevant accounting standards, in such manner as may be specified by the SEBI.

VALUER

The Investment Manager, in consultation with the Trustee, appointed KPMG Valuation Services LLP as the Valuer of the Trust for the Financial Year 2024. For details in relation to the availability of the latest valuation report for the Portfolio, see "*Valuation*" on page 297. KPMG Valuation Services LLP has also undertaken a full valuation of IRB LTPL, IRB GTPL and IRB KTPL and the TOT-12 and TOT-13 Valuation Reports dated March 8, 2024 has been included in this Letter of Offer.

The Valuer is not an Associate of the Sponsor, the Investment Manager or the Trustee, and has not less than five years of experience in the valuation of infrastructure assets.

SECTION VII – FINANCIAL INFORMATION

FINANCIAL STATEMENTS

A. CONSOLIDATED FINANCIAL STATEMENTS

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Gokhale & Sathe
Chartered Accountants
304/308/309, Udyog Mandir No.1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016.
Telephone + 91 (22) 43484242
Fax + 91 (22) 43484241

M S K A & Associates
Chartered Accountants
602, Floor 6, Raheja Titanium
Western Express Highway,
Geetanjali Railway Colony,
Ram Nagar, Goregaon (E),
Mumbai 400063, India
Tel: +91 22 6238 0519

Independent Auditors' Review Report on Unaudited Condensed Interim Consolidated Financial Statements for the nine months period ended December 31, 2023 of IRB Infrastructure Trust.

To
The Board of Directors,
MMK Toll Roads Private Limited
The Investment manager of the IRB Infrastructure Trust ("the Investment Manager")

1. We have jointly reviewed the accompanying Unaudited Condensed Interim Consolidated Financial Statements of IRB Infrastructure Trust ("the Trust") and its subsidiaries (the Trust and its subsidiaries together referred to as "the Group") which comprises Condensed Interim Consolidated Balance Sheet as on December 31, 2023, Unaudited Condensed Interim Consolidated Statement of Profit and Loss, including other comprehensive income, Unaudited Condensed Interim Consolidated Statement of Net Assets at Fair Value, Unaudited Condensed Interim Consolidated Statement of Total returns at Fair Value, Unaudited Condensed Interim Consolidated Cash Flow Statement and Unaudited Condensed Interim Consolidated Statement of Changes in Unitholders Equity for the nine months period then ended and a summary of select explanatory notes (together hereinafter referred to as the "Unaudited Condensed Interim Consolidated Financial Statements"). These Unaudited Condensed Interim Consolidated Financial Statements for the period from April 01, 2023 to December 31, 2023 have been prepared solely for inclusion in the Letter of Offer ("LOF") in connection with the proposed right issue of units of the Trust.

2. The Unaudited Condensed Interim Consolidated Financial Statements, which is the responsibility of the Investment Manager and approved by the Investment Manager's Board of Directors, has been prepared in accordance with the requirements of SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time read with the Paragraph 3.23 of Chapter 3 of the Securities and Exchange Board of India ("SEBI") Master Circular No. SEBI/HO/DDHS-PoD-2/P/CIR/2023/115 dated July 06, 2023, as amended ("SEBI Circular"), together known as ("InvIT Regulations"), and recognition and measurement principles laid down in Indian Accounting Standard 34, Interim Financial Reporting ('Ind AS 34') prescribed under rule 2(1)(a) of Companies (Indian Accounting Standards) Rules 2015, as amended and other recognised accounting principles generally accepted in India, to the extent not inconsistent with the InvIT Regulations.

3. We conducted our review in accordance with the Standard on Review Engagements (SRE) 2410 Review of Interim Financial Information Performed by the Independent Auditor of the Entity" issued by the Institute of Chartered Accountants of India. A review consists of making inquiries, primarily of Investment Manager's personnel responsible for financial and accounting matters and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Standards on Auditing and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Gokhale & Sathe
Chartered Accountants
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7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016.
Telephone + 91 (22) 43484242
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M S K A & Associates
Chartered Accountants
602, Floor 6, Raheja Titanium
Western Express Highway,
Geetanjali Railway Colony,
Ram Nagar, Goregaon (E),
Mumbai 400063, India
Tel: +91 22 6238 0519

4. This Statement includes the unaudited condensed interim financial statements of the Trust and the following entities:

Sr No	Name of Entity	Relationship with the Trust
1	AE Tollway Limited	Subsidiary
2	Yedeshi Aurangabad Tollway Limited	Subsidiary
3	IRB Westcoast Tollway Limited	Subsidiary
4	Kaithal Tollway Limited	Subsidiary
5	Solapur Yedeshi Tollway Limited	Subsidiary
6	CG Tollway Limited	Subsidiary
7	Udaipur Tollway Limited	Subsidiary
8	Kishangarh Gulabpura Tollway Limited	Subsidiary
9	IRB Hapur Moradabad Tollway Limited	Subsidiary
10	Palsit Dankuni Tollway Private Limited (w.e.f. 2 April 2022)	Subsidiary
11	IRB Golconda Expressway Private Limited (w.e.f. 11 August 2023)	Subsidiary
12	IRB Lalitpur Tollway Private Limited (w.e.f. 10 November 2023)	Subsidiary
13	Samakhiyali Tollway Private Limited (w.e.f. 28 December 2023)	Subsidiary

5. Based on our review conducted and procedures performed as stated in paragraph 3 above and based on the consideration of review reports of other auditors as stated in paragraph 7 below, nothing has come to our attention that causes us to believe that the accompanying Unaudited Condensed Interim Consolidated Financial Statements, prepared in accordance with the recognition and measurement principles laid down in Ind AS 34 prescribed under prescribed under rule 2(1)(a) of Companies (Indian Accounting Standards) Rules 2015, as amended and other recognised accounting principles generally accepted in India, to the extent not inconsistent with the InvIT Regulations, has not disclosed the information required to be disclosed in terms of Regulation 23 of the SEBI (Infrastructure Investment Trusts) Regulation, 2014, as amended, read with SEBI circular, including the manner in which it is to be disclosed, or that it contains any material misstatement.

6. We draw attention to Note 14 of the accompanying unaudited condensed interim consolidated financial statements, which describes the presentation of ‘Unit Capital’ as ‘Equity’ to comply with the InvIT Regulations.

   Our conclusion is not modified in respect of this matter.

7. We did not review the unaudited condensed interim financial statements of 6 subsidiaries included in the Unaudited Condensed Interim Consolidated Financial Statements, whose unaudited condensed interim financial statements reflects total assets of Rs. 1,20,900 million (before consolidation adjustments) as on December 31, 2023, total revenues of Rs. 15,609 million (before consolidation adjustment), total net loss after tax of Rs. 5,351 million (before consolidation adjustment), total comprehensive loss of Rs. 5,351 million (before consolidation adjustment) and cash flows (net) of Rs. 267 million for the period April 01, 2023 to December 31, 2023, as considered in the Unaudited Condensed Interim Consolidated Financial Statements. These condensed interim financial statements have been reviewed by other auditors whose reports have been furnished to us by the Management and our conclusion on the Unaudited Condensed Interim Consolidated Financial Statements, in so far as it relates to the amounts and disclosures included in respect of these subsidiaries is based solely on the report of the other auditors and the procedures performed by us as stated in paragraph 3 above.

   Our conclusion is not modified in respect of the above matter.

Gokhale & Sathe
Chartered Accountants
304/308/309, Udyog Mandir No.1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016.
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M S K A & Associates
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Geetanjali Railway Colony,
Ram Nagar, Goregaon (E),
Mumbai 400063, India
Tel: +91 22 6238 0519

8. The Unaudited Condensed Interim Consolidated Financial Statements of the Trust for the period April 01, 2022 to December 31, 2022 included in the Unaudited Condensed Interim Consolidated Financial Statements, were reviewed by Gokhale & Sathe, one of the Joint Auditor of the Trust, whose report dated March 08, 2024 expressed an unmodified conclusion of those Unaudited Condensed Interim Consolidated Financial Statements.

   M S K A & Associates conclusion is not modified in respect of this matter.

9. The consolidated financial information for the year ended March 31, 2023, included in the Unaudited Condensed Interim Consolidated Financial Statements, are from the consolidated financial statements of the Trust, which were audited by Gokhale & Sathe, one of the Joint Statutory Auditor of the Trust, whose report dated May 12, 2023 expressed an unmodified opinion of those audited consolidated financial statements.

   M S K A & Associates conclusion is not modified in respect of this matter.

10. The report is addressed to the Board of Directors of the Investment Manager and submitted solely for inclusion in the LOF in connection with the proposed rights issue of units of the Trust.

    Accordingly, do not accept or assume any liability or any duty of care for any other purpose or to any other person to whom this report is shown or into whose hands it may come without our prior consent in writing.

    Our conclusion is not modified in respect of this matter.

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration No.103264W

SD /-

CA Kaustubh Deshpande
Partner
Membership No.: 121011
UDIN:24121011BKAALP2178

Place: Mumbai
Date: March 08, 2024

For M S K A & Associates
Chartered Accountants
ICAI Firm Registration No.105047W

SD /-

Nitin Tiwari
Partner
Membership No.: 118894
UDIN: 24118894BKGQGP4850

Place: Mumbai
Date: March 08, 2024

IRB Infrastructure Trust
Condensed Interim Consolidated Balance sheet as at December 31, 2023

(Rs. in million)

	Notes	As at December 31, 2023 (Unaudited)	As at March 31, 2023 (Audited)
ASSETS			
Non-current assets			
Property, Plant and Equipment	4	6.87	7.59
Goodwill		604.54	604.54
Other Intangible assets	4	3,08,561.98	2,28,418.29
Intangible assets under development	4	6,218.25	2,421.67
Financial assets			
i) Others	7	32.06	0.33
Other non-current assets	9	8.00	174.07
Deferred tax assets	8	1,280.76	792.60
		3,16,712.46	**2,32,419.09**
Current assets			
Financial assets			
i) Investments	5	7,095.52	1,283.09
ii) Trade receivables	6	213.05	84.67
iii) Cash and cash equivalents	10	687.54	731.31
iv) Bank balance other than (iii) above	11	9,453.30	4,866.69
v) Others	7	2,219.42	1,448.56
Current tax assets (net)	12	176.67	24.81
Other current assets	13	2,250.32	2,657.07
		22,095.82	**11,096.20**
Total assets		**3,38,808.28**	**2,43,515.29**
EQUITY AND LIABILITIES			
Equity			
Unit Capital	14	1,15,445.40	87,929.33
Subordinate debt	15	16,916.65	-
Other equity			
Other reserves	16	(14,777.41)	(10,395.80)
Total Equity		**1,17,584.64**	**77,533.53**
Non-controlling interests		1.39	0.81
Total unit holder's equity		**1,17,586.03**	**77,534.34**
Non-current liabilities			
Financial liabilities			
i) Borrowings	17	1,69,150.24	98,943.95
ii) Other financial liabilities	19	37,493.58	35,780.80
iii) Trade payables			
a) total outstanding dues of micro enterprises and small enterprises		-	-
b) total outstanding dues of creditors other than micro enterprises and small enterprises	20	-	4,165.72
Provisions	21	3,418.74	2,965.03
Deferred tax liabilities	8	235.60	36.80
		2,10,298.16	**1,41,892.30**
Current liabilities			
Financial liabilities			
i) Borrowings	17	1,261.08	6,135.65
ii) Trade payables	18		
a) total outstanding dues of micro enterprises and small enterprises		1.50	1.61
b) total outstanding dues of creditors other than micro enterprises and small enterprises		7,945.74	15,303.87
iii) Other financial liabilities	19	1,623.92	2,549.37
Other current liabilities	22	91.85	98.15
		10,924.09	**24,088.65**
Total liabilities		**2,21,222.25**	**1,65,980.95**
Total equity and liabilities		**3,38,808.28**	**2,43,515.29**

The summary of selected explanatory notes forms an integral part of the Unaudited Condensed Interim Consolidated Financial Statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

Place: Mumbai
Date: March 08, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: March 08, 2024

IRB Infrastructure Trust
Unaudited Condensed Interim Consolidated Statement of Profit and Loss for the period April 01, 2023 to December 31, 2023

(Rs. in million)

Particulars	Notes	Nine months ended December 31, 2023 (Unaudited)	Nine months ended December 31, 2022 (Unaudited)
Income			
Revenue from operations	23	26,535.36	19,896.67
Other income	24	527.86	161.32
Total income		**27,063.22**	**20,057.99**
Expenses			
Valuation Expenses		2.29	0.97
Audit fees	28A	3.68	3.85
Operating Expenses	25	13,201.29	9,305.29
Project Management Fees		2,931.62	1,997.38
Insurance and Security Expenses		66.74	8.13
Trustee Fees		4.54	3.33
Depreciation on Property, Plant and Equipment	26	0.72	0.95
Amortisation of Intangible Assets	26	2,614.32	1,957.61
Finance costs (Interest)	27	9,531.37	6,698.66
Finance costs (Others)	27	814.76	990.24
Legal & Professional Fees		239.81	136.14
Investment Manager Fees		122.60	42.39
Custodian fees		1.10	0.24
Fair value loss on measurement of other payable		1,676.37	356.63
Other expenses	28	63.25	86.20
Total expenses		**31,274.46**	**21,588.00**
Profit/(loss) before tax		**(4,211.24)**	**(1,530.02)**
Tax expenses			
Current tax	36	(75.08)	351.25
Deferred tax	36	(289.36)	(445.56)
Total tax expenses		**(364.44)**	**(94.30)**
Profit/(loss) after tax		**(3,846.80)**	**(1,435.72)**
Other comprehensive income			
Item that will not be reclassified to profit or loss:			
(a) Re-measurement (loss)/gain on defined benefit plans (net of taxes)		-	-
Other comprehensive income/ (loss) for the period, net of tax		-	-
Total comprehensive income/(loss) for the period		**(3,846.80)**	**(1,435.72)**
Profit/(loss) after tax		**(3,846.80)**	**(1,435.72)**
Attributable to:			
Unit holders		(3,846.93)	(1,436.18)
Non-controlling interests		0.13	0.46
Total comprehensive income for the period			
Attributable to:			
Unit holders		(3,846.93)	(1,436.18)
Non-controlling interests		0.13	0.46
Earnings per unit (Face value of Rs 100 each)			
Basic	42	(4.03)	(1.64)
Diluted		(4.03)	(1.64)

The summary of selected explanatory notes forms an integral part of the Unaudited Condensed Interim Consolidated Financial Statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: March 08, 2024

Place: Mumbai
Date: March 08, 2024

IRB Infrastructure Trust

Unaudited Condensed Interim Consolidated Cash Flows Statement for the period April 01, 2023 to December 31, 2023

(Rs. in million)

Particulars	Nine months ended December 31, 2023 (Unaudited)	Nine months ended December 31, 2022 (Unaudited)
Cash flow from operating activities		
Profit/(loss) before tax	(4,211.24)	(1,530.02)
Adjustment to reconcile loss before tax to net cash flows:		
Depreciation and amortisation	2,615.04	1,958.56
Resurfacing expenses	453.71	1,179.10
Fair value gain on mutual funds	(66.87)	(7.32)
Net (gain) on sale of current Investment	(77.82)	(42.12)
Finance costs	10,113.54	7,688.90
Interest income	(368.74)	(110.53)
Gain/(loss) on fair value measurement of other payable	1,676.37	356.63
Operating profit before working capital changes	**10,133.99**	**9,493.19**
Movement in working capital:		
Increase/ (Decrease) in trade payables	(11,873.19)	484.04
Decrease in other financial liabilities	(1,474.83)	(274.45)
Decrease in other liabilities	(58.75)	(438.94)
Increase in trade receivables	(128.38)	(0.10)
Decrease / (Increase) in other financial assets	(738.77)	496.71
Decrease in other assets	2,313.69	420.27
Cash generated from operations	**(1,826.24)**	**10,180.73**
Taxes paid (net of refunds)	(71.71)	(179.49)
Net cash flows (used in)/generated from operating activities (A)	**(1,897.95)**	**10,001.24**
Cash flows from investing activities		
Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development	(86,554.59)	(7,745.84)
Proceeds from sale/ (purchase) of current investments (net)	(5,667.73)	(431.32)
Investments in bank deposits (having maturity of more than three months) (net)	(4,586.61)	(1987.42)
Interest received	305.66	129.08
Net cash flows (used in) investing activities (B)	**(96,503.27)**	**(10,035.50)**
Cash flows from financing activities		
Proceeds from non-current borrowings	1,19,742.76	31,668.76
Repayment of non-current borrowings	(48,312.74)	(25,772.63)
Proceed of current borrowings	97.66	(267.50)
Repayment of current borrowings	(5,350.72)	1,532.48
Issue of Unit capital	28,619.50	2,425.22
Return of Unit capital	(1,103.43)	-
Issue of Subordinate Debt	16,916.65	-
Unit issue expenses	(85.13)	(15.33)
Finance cost paid	(9,725.17)	(7,575.83)
Transaction cost paid	(1,994.36)	-
Interest distribution to unitholders	(449.55)	-
Net cash flows generated from financing activities (C)	**98,355.47**	**1,995.17**
Net increase / (decrease) in cash and cash equivalents (A+B+C)	**(45.75)**	**1,960.90**
Cash and cash equivalents at the beginning of the year	731.31	287.23
Add: Cash acquired on transfer of SPV's	1.98	-
Cash and cash equivalents at the end of the period	**687.54**	**2,248.13**
Components of cash and cash equivalents		
Balances with scheduled banks:		
- Trust, retention and other escrow accounts	375.57	1,833.69
- Others	214.72	279.80
- In deposit accounts with original maturity less than 3 months	80.00	124.50
Cash on hand	17.25	10.14
Total cash and cash equivalents	**687.54**	**2,248.13**

IRB Infrastructure Trust

Unaudited Condensed Interim Consolidated Cash Flows Statement for the period April 01, 2023 to December 31, 2023

(Rs. in million)

Particulars	**Nine months ended December 31, 2023 (Unaudited)**	**Nine months ended December 31, 2022 (Unaudited)**
Debt reconciliation statement in accordance with Ind AS 7		
Opening balances		
Long term borrowing	1,01,369.82	94,124.22
Short term borrowing	5,350.72	4,085.74
Movements		
Cash Flows		
Long term borrowing	72,418.93	5,896.12
Short term borrowing	(5,253.06)	1,264.98
Non-cash changes		
Long term borrowing	-	-
Short term borrowing	-	-
Closing balances		
Long term borrowing	1,73,788.75	1,00,020.34
Short term borrowing	97.66	5,350.72

Notes :

1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. The Unaudited Condensed Interim Consolidated Cash Flow Statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows".
4. The Borrowings reflected in above Debt Reconciliation Statement are gross of Unamortised Transaction Cost.

The summary of selected explanatory notes forms an integral part of the Unaudited Condensed Interim Consolidated Financial Statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

Place: Mumbai
Date: March 08, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: March 08, 2024

IRB Infrastructure Trust

Unaudited Condensed Interim Consolidated Statement of changes in unitholder's equity for the period April 01, 2023 to December 31, 2023

Statement of changes in Unitholders equity

A. Unit capital:

				(Rs. in million)
	As at December 31, 2023 (Unaudited)		As at March 31, 2023 (Audited)	
i) Units issued, subscribed and fully paid	**No.**	**Rs.**	**No.**	**Rs.**
Units having face value of Rs. 100/-				
Balance at the beginning of the year	87,92,93,265	87,929.33	85,50,43,265	85,504.33
Issue of Unit capital	14,24,00,000	28,619.50	2,42,50,000	2,425.00
Return of Unit capital (refer note 33)	-	(1,103.43)	-	-
Balance at the end of the period / year	**1,02,16,93,265**	**1,15,445.40**	**87,92,93,265**	**87,929.33**

B. Other equity

		(Rs. in million)
	As at December 31, 2023 (Unaudited)	**As at March 31, 2023 (Audited)**
Retained earnings		
Balance at the beginning of the year	(10,395.80)	(8,108.29)
Loss for the period / year	(3,846.93)	(2,272.18)
Interest Distribution (refer note 33)	(449.55)	-
Unit Issue expenses	(85.13)	(15.33)
Balance at the end of the period / year	**(14,777.41)**	**(10,395.80)**

The summary of selected explanatory notes forms an integral part of the Unaudited Condensed Interim Consolidated Financial Statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
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Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: March 08, 2024

Place: Mumbai
Date: March 08, 2024

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Unaudited Condensed Interim Consolidated Statement of Net Assets at Fair Value

(Rs. in Million)

	December 31, 2023 (Unaudited)		March 31, 2023 (Audited)	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	3,38,808.28	4,62,383.41	2,43,478.49	2,99,372.54
B. Liabilities (at book value)	2,21,222.25	1,99,889.98	1,65,944.15	1,16,629.02
C. Net Assets (A-B)	1,17,586.03	2,62,493.43	77,534.34	1,82,743.52
D. Number of units (in millions)	1,021.69	1,021.69	879.29	879.29
E. NAV (C/D) (Amount in Rs.)	**115.09**	**256.92**	**88.18**	**207.83**

Project wise break up of fair value of total assets:

Name of the project	**December 31, 2023 (Unaudited)**
IRB Westcoast Tollway Limited (IRBWTL)	34,541.22
Solapur Yedeshi Tollway Limited (SYTL)	26,931.18
Yedeshi Aurangabad Tollway Limited (YATL)	45,566.22
Kaithal Tollway Limited (KTL)	24,304.46
AE Tollway Limited (AETL)	35,334.14
Udaipur Tollway Limited (UTL)	27,289.43
CG Tollway Limited (CGTL)	29,021.07
Kishangarh Gulabpura Tollway Limited (KGTL)	21,013.68
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	43,564.70
Palsit Dankuni Tollway Private Limited (PDTPL)	17,278.18
IRB Golconda Expressway Private Limited (IGEPL)	1,44,119.82
Samakhiyali Tollway Private Limited (STPL)	3,779.36
Subtotal	**4,52,743.46**
Add : IRB Infrastructure Trust Assets	**9,639.96**
Total assets	**4,62,383.41**

B. Unaudited Condensed Interim Consolidated Statement of total returns at Fair Value :

(Rs. in Million)

Particulars	**For the period ended December 31, 2023**	**For the year ended March 31, 2023**
Total Comprehensive Income (As per the Statement of Profit and Loss)	(3,846.80)	(2,271.59)
Add/Less: other changes in fair value (e.g., in investment property, property, plant & equipment (if cost model is followed)) not recognized in total comprehensive income	1,44,907.40	1,05,209.18
Total Return	**1,41,060.60**	**1,02,937.59**

Notes :
Fair value of assets as at December 31, 2023 and March 31, 2023 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Nitin Tiwari
Partner
Membership No. 118894

Place: Mumbai
Date: March 08, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D.Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: March 08, 2024

1 **Corporate Information**

The IRB Infrastructure Trust (the "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under the Registration Act, 1908 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Trust is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registraion certificate from SEBI on November 25, 2019.

The Trust has been formed to invest in infrastructure assets primarily being in the road sector in India. The Trust's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Trust's portfolio comprises of thirteen road projects as listed below:-

Project SPV Name**	Residual Concession life*	Proposed shareholding	Nature of Investment	Status	Principal Activities	Country of incorporation
IRB Westcoast Tollway Limited (IRBWTL)	18 years 2 Months 2 days	100%	Subsidiary	Tolling and Construction	Construction and operation of road including toll collection.	India
Solapur Yedeshi Tollway Limited (SYTL)	20 years 0 Months 20 days	100%	Subsidiary	Operating		India
Yedeshi Aurangabad Tollway Limited (YATL)	17 years 5 Months 30 days	100%	Subsidiary	Operating		India
Kaithal Tollway Limited (KTL)	18 years 6 Months 14 days	100%	Subsidiary	Operating		India
AE Tollway Limited (AETL)	16 years 6 Months 31 days	100%	Subsidiary	Operating		India
Udaipur Tollway Limited (UTL)	14 years 8 Months 2 days	100%	Subsidiary	Operating		India
CG Tollway Limited (CGTL)	13 years 10 Months 3 days	100%	Subsidiary	Operating		India
Kishangarh Gulabpura Tollway Limited (KGTL)	14 years 1 Months 20 days	100%	Subsidiary	Operating		India
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	17 years 4 Months 26 days	100%	Subsidiary	Operating		India
Palsit Dankuni Tollway Private Limited (PDTPL) w.e.f 02.04.2022	15 years 3 Months 1 day	100%	Subsidiary	Tolling and Construction		India
IRB Golconda Tollway Private Limited(IGEPL) w.e.f 11.08.2023	29 years 7 Months 11 days	100%	Subsidiary	Operating		India
Samakhiyali Tollway Private Limited(STPL) w.e.f 28.12.2023	19 years 11 Months 27 days	100%	Subsidiary	Tolling and Construction		India
IRB Lalitpur Tollway Private Limited(ILTPL) w.e.f 10.11.2023	-	100%	Subsidiary	Appointed date pending		India

* Represents residual concession life as at December 31, 2023 as per original concession period (without considering extension of concession period, if any).

** Of the above Project SPVs, IRBWTL, SYTL, YATL, AETL, CGTL, UTL and IRBHMTL have been converted to public companies on November 13, 2019 and KTLand KGTL on November 14, 2019 .

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.
The Trust has been listed on NSE w.e.f. 03.04.2023.

2 **Basis of preparation of Consolidated Financial Statements**

The Unaudited Condensed Interim Consolidated Financial Statements which comprises Condensed Interim Consolidated Balance Sheet as on December 31, 2023, Unaudited Condensed Interim Consolidated Statement of Profit and Loss, including other comprehensive income, Unaudited Condensed Interim Consolidated Statement of Net Assets at Fair Value, Unaudited Condensed Interim Consolidated Statement of total returns at Fair Value , Unaudited Condensed Interim Consolidated Cash Flow Statement and Unaudited Condensed Interim Consolidated Statement of Changes in Unitholders Equity for the nine months period then ended and a summary of select explanatory notes (together herein after referred to as the "Unaudited Condensed Interim Consolidated Financial Statements"). These Unaudited Condensed Interim Consolidated Financial Statemets for the period from April 1, 2023 to December 31, 2023 have been prepared solely for inclusion in the Letter of Offer ("LOF") in connection with the proposed right issue of units of the Trust.

The Unaudited Condensed Interim Consolidated Financial Statements has been prepared in accordance with the requirements of SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time read with the Paragraph 3.23 of Chapter 3 of the SEBI Circular No. SEBI/HO/DDHS-PoD-2/P/CIR/2023/115 dated July 06, 2023 ("SEBI Circular"), together known as ("lnvlT Regulations"); recognition and measurement principles laid down in the Indian Accounting Standards 34 "Interim Financial Reporting" ("Ind AS 34") as prescribed under Rule 2(1) (a) of Companies (Indian Accounting Standards) Rules, 2015, as amended, and other recognised accounting principles generally accepted in India to the extent not inconsistent with the lnvlT Regulations (refer note 14 below on presentation of "Unit Capital" as "Equity" instead of compound instruments under Ind AS 32 - Financial Instruments: Presentation).

These unaudited condensed interim consolidated financial statements for the period from April 01, 2023 to December 31, 2023 have been prepared solely for inclusion in the Letter of Offer in connection with the proposed rights issue of units of the Trust, and should not be relied upon for any other purpose.

These Unaudited Condensed Interim Consolidated Financial Statements are not the statutory accounts for the purpose of any statutory compliances or for regulatory requirements in any jurisdiction. The Unaudited Condensed Consolidated Financial Statements of the Trust for the period from April 01, 2023 to December 31, 2023 were approved by the Board of Directors of the Investment Manager and authorised for inclusion in the Letter of Offer of the Trust on March 08, 2024.

The Unaudited Condensed Interim Consolidated Financial Statements do not include all the information and disclosures required in the Annual Financial Statements, and should be read in conjunction with the Trust's Annual Consolidated Financial Statements as at March 31, 2023.

3 **Standard issued but not yet effective**

Ministry of Corporate affairs ("MCA") notifies new standard or amendment to the existing standards. There is no such notification which would have been applicable from January 01, 2024.

Note 4 : Property, Plant and Equipment

(Rs. in million)

	Premises	Computer	Office Equipments	Furniture and Fixture	Total
Cost					
At 31 March 2022	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Additions	-	-	-	-	-
Disposals/ Adjustments	-	-	0.09	-	0.09
At 31 March 2023	**16.09**	**0.30**	**1.31**	**0.39**	**18.10**
Additions	-	-	-	-	-
Disposals/ Adjustments	-	-	-	-	-
At 31 December 2023	**16.09**	**0.30**	**1.31**	**0.39**	**18.10**
Depreciation					
At 31 March 2022	**7.40**	**0.29**	**1.28**	**0.38**	**9.34**
Additions	1.20	0.00	0.03	0.01	1.25
Disposals/ Adjustments	-	-	0.08	-	0.08
At 31 March 2023	**8.60**	**0.29**	**1.23**	**0.39**	**10.51**
Additions	0.71	-	0.01	0.00	0.72
Disposals/ Adjustments	-	-	-	-	-
At 31 December 2023	**9.30**	**0.29**	**1.24**	**0.39**	**11.23**
Net Book value					
At 31 December 2023	**6.79**	**0.01**	**0.07**	**0.00**	**6.87**
At 31 March 2023	**7.49**	**0.01**	**0.08**	**0.00**	**7.59**

Net Book value	**December 31, 2023 (Unaudited)**	**March 31, 2023 (Audited)**
Property, Plant and Equipment	6.87	7.59

Note 4 : Other Intangible Assets and Intangible Assets under development

Intangible Assets (Rs. in million)

Particulars	Toll Collection Rights	Total
Cost		
At 31 March 2022	**2,28,159.42**	**2,28,159.42**
Additions	9,663.30	9,663.30
Deletions / Adjustments	295.32	295.32
At 31 March 2023	**2,37,527.40**	**2,37,527.40**
Additions	82,758.00	82,758.00
Deletions / Adjustments	-	-
At 31 December 2023	**3,20,285.40**	**3,20,285.40**
Amortisation		
At 31 March 2022	**6,299.93**	**6,299.93**
Additions	2,809.17	2,809.17
Deletions / Adjustments	-	-
At 31 March 2023	**9,109.10**	**9,109.10**
Additions	2,614.32	2,614.32
Deletions / Adjustments	-	-
At 31 December 2023	**11,723.42**	**11,723.42**
Net Book value		
At 31 December 2023	3,08,561.98	3,08,561.98
At 31 March 2023	2,28,418.29	2,28,418.29

Particulars	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Toll Collection Rights	3,08,561.98	2,28,418.29
Total	**3,08,561.98**	**2,28,418.29**

Intangible assets under development (Rs. in million)

Particulars	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Toll Collection Rights		
At the beginning of the year	2,421.67	1,290.89
Add : Development during the year	12,929.81	11,128.99
	15,351.48	**12,419.88**
Less : Transfer to Intangible Asset (Toll Collection Rights)	9,133.23	9,998.21
Closing balance	**6,218.25**	**2,421.67**
Total	**6,218.25**	**2,421.67**

Tangible and Intangible assets given as security
Tangible and Intangible assets are subject to first charge to secured long-term borrowings from the lenders.

Financial Assets
Note 5 : Investment

(Rs. in million)

Particulars	December 31, 2023 (Unaudited)			March 31, 2023 (Audited)		
	Face Value (Rs.)	No of Units	Amount	Face Value (Rs.)	No of Units	Amount
i) Investments in Mutual Funds						
Quoted (Fair Value Through Profit or Loss (FVTPL))						
Canara Robeco Liquid Fund - Direct Plan - Growth	1,000	75,877.11	215.54	1,000	18,486.04	49.85
Canara Robeco Overnight Fund - Direct Plan - Growth	1,000	16,455.17	20.05	1,000	5,174.20	6.00
IDBI Liquid Fund - Direct Plan - Growth		-	-	1,000	64,718.69	156.76
LIC MF Liquid Fund - Direct Plan - Growth	1,000	27,018.56	116.30	-	-	-
ABSL Liquid Fund - Direct Plan - Growth	100	30,99,066.32	1,184.93	-	-	-
ABSL Overnight Fund - Direct Plan - Growth	1,000	17,97,535.98	2,289.82	-	-	-
OGRD - Union Overnight Fund Growth - Direct	1,000	4,45,706.77	552.60	-	-	-
HSBC Liquid Fund Direct Growth	1,000	29,113.33	68.76	-	-	-
SBI Liquid Fund - Direct Growth	1,000	2,65,020.02	983.21	1,000	2,91,778.24	1,028.03
SBI Overnight Fund - Direct Growth	1,000	4,34,250.03	1,664.31	1,000	11,632.96	42.44
Total			**7,095.52**			**1,283.09**

IRB Infrastructure Trust
Notes to Unaudited Condensed Interim Consolidated Financial Statements as at December 31, 2023

Note 6 : Trade receivable

(Rs. in million)

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
(Unsecured, considered good, unless otherwise stated)		
Related parties (Refer Note 38)	0.51	0.61
Others	212.54	84.05
Total	**213.05**	**84.67**

The Trust has not identified any credit impairment loss as at December 31, 2023 and March 31, 2023

Note 7 : Other financial assets

(Rs. in million)

	December 31, 2023 (Unaudited)		March 31, 2023 (Audited)	
	Current	**Non-current**	**Current**	**Non-current**
(Unsecured, considered good, unless otherwise stated)				
Interest accrued on fixed deposits	74.65	-	11.57	-
Interest receivable from others	10.63	-	3.73	-
Retention money receivable	568.71	-	530.54	-
Receivable from Related parties (BG Margin receivable) (Refer Note 38)	-	30.95	-	-
Receivable from Government Authorities (NHAI)	1,363.22	-	816.07	-
Other receivable	191.22	-	75.65	-
Security and other deposits	10.99	1.11	10.99	0.33
Total	**2,219.42**	**32.06**	**1,448.56**	**0.33**

IRB Infrastructure Trust
Notes to Unaudited Condensed Interim Consolidated Financial Statements as at December 31, 2023

Note 8 : Deferred tax assets / Deferred tax liabilities

(Rs. in million)

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Deferred tax liabilities (net):		
Deferred tax liabilities:		
Difference in Depreciation and other differences in block of Property, Plant and equipment and Intangible assets as per tax books & financial books	265.61	36.80
Deferred tax assets:		
Business Losses	30.01	-
Deferred tax liabilities (net)	**235.60**	**36.80**
Deferred tax assets:		
Deferred Tax assets on Fair valuation	1,280.76	792.60
Deferred Tax Assets	**1,280.76**	**792.60**
Deferred tax (assets) / liabilities (net)	**(1,045.16)**	**(755.80)**

Note 9 : Other non - current assets

(Rs. in million)

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Duties and taxes receivable	8.00	174.07
Total	**8.00**	**174.07**

Note 10 : Cash and cash equivalents

(Rs. in million)

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Cash and Bank balances		
Balances with banks:		
-on current accounts	214.72	279.37
-on trust, retention and other escrow accounts*	375.57	394.06
Deposits with banks		
-Original maturity less than 3 months	80.00	49.50
Cash on hand	17.25	8.38
Total	**687.54**	**731.31**

* First charge on above to the extent of amount payable as per the waterfall mechanism as defined in the Concession Agreement / Common Loan Agreement.

Note 11 : Bank balance other than cash and cash equivalent

(Rs. in million)

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Maturity less than 3 months		
Major Maintenance Reserve Account	2,004.50	-
Debt service reserve account with banks /earmarked balance**	429.21	
Maturity more than 3 months less than 12 months		
Cash Reserve	1,000.00	-
Other deposits	-	15.09
Debt service reserve account with banks /earmarked balance**	1,549.89	3,459.60
Major Maintenance Reserve Account	685.50	1,390.00
Maturity more than 12 months		
Debt service reserve account with banks /earmarked balance**	3,782.20	-
Other deposits	2.00	2.00
Total	**9,453.30**	**4,866.69**

Debt service reserve account/ major maintenance reserve account and trust, retention and other escrow accounts

Bank deposits are marked lien / pledged against the non current secured loan as per term loan agreement with the lender, further the lenders have first charge on trust, retention and other escrow accounts.

** The deposits to the extent of Rs. 5,761.30 million (March 31, 2023 : Rs. 3,459.60 million) maintained by the Project SPV Group with bank includes time deposits, which are held against Debt Service Reserve (DSR), are considered as current portion under the head “Other bank balances” since the same are encashable by the lenders in the event of default by the Project SPV Group, if any.

Current deposits are made for varying periods of between one day and three months, depending on the immediate cash requirements of the group and earn interest at the respective current deposit rates. Other time deposits earn interest at the rate of 5.50% to 7.50% p.a. (March 31, 2023: 4.70% to 7.95% p.a).

Refer note 17 for details of security against term loans.

For the purpose of statement of cash flows, cash and cash equivalents comprise the following:

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Balance with banks:		
-on current accounts	214.72	279.37
-on trust, retention and other escrow accounts	375.57	394.06
Fixed deposits less than 3 months	80.00	49.50
Cash on hand	17.25	8.38
Total	**687.54**	**731.31**

Note 12 : Current tax assets (net)

(Rs. in million)

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Advance income-tax (net of provision for tax)	176.67	24.81
Total	**176.67**	**24.81**

Note 13 : Other current assets

(Rs. in million)

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
(Unsecured, considered good, unless otherwise stated)		
Advance with suppliers		
- Related parties (refer note 38)	318.85	1,347.33
- Others	49.67	45.29
Mobilisation advances (refer note 38)	301.37	33.68
Prepaid expenses	164.31	45.88
Duties and taxes receivable	1,365.10	1,184.89
Contract assets	51.02	-
Total	**2,250.32**	**2,657.07**

Note : 14 : Unit capital (Rs. in million)

	December 31, 2023 (Unaudited)		March 31, 2023 (Audited)	
	No. of units	Amount (Rs. in million)	No. of units	Amount (Rs. in million)
Unit capital*				
Authorised Unit capital				
Units having face value of Rs.100 each	1,02,16,93,265	1,15,445.40	87,92,93,265	87,929.33
	1,02,16,93,265	**1,15,445.40**	**87,92,93,265**	**87,929.33**
Issued Unit capital				
Units having face value of Rs.100 each	1,02,16,93,265	1,15,445.40	87,92,93,265	87,929.33
Total	**1,02,16,93,265**	**1,15,445.40**	**87,92,93,265**	**87,929.33**

Terms / rights attached to equity shares

The Project SPVs have only one class of equity shares having par value of Rs. 100/- per share Each holder of equity shares is entitled to one vote per share. The Project SPVs declares and pays dividend in Indian rupees.

In the event of liquidation of the Project SPV, the holders of equity shares will be entitled to receive remaining assets of the Project SPV, after distribution of all preferential amounts. The distribution will be in proportion to the number of equity shares held by the shareholders.

* Under the provisions of the InvIT Regulations, Trust is required to distribute to Unitholders not less than 90% of the net distributable cash flows of the Trust for each financial year. Accordingly, a portion of the Unit Capital contains a contractual obligation of the Trust to pay to its Unitholders cash distributions. Hence, the Unit Capital is a compound financial instrument which contains equity and liability components in accordance with Ind AS 32 - Financial Instruments: Presentation. However, in accordance with Chapter 3 and Chapter 4 of the SEBI circular, the Unit capital have been presented as "Equity" in order to comply with the requirements of Section H of Chapter 3 to the SEBI circular, dealing with the minimum presentation and disclosure requirements for key financial statements. Consistent with Unit Capital being classified as equity, the distributions to Unitholders is also presented in Statement of Changes in Unitholders' Equity when the distributions are approved by the Board of Directors of the Investment Manager.

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

Reconciliation of the number of unit outstanding and the amount of Unit capital:

	December 31, 2023 (Unaudited)		March 31, 2023 (Audited)	
Units issued, subscribed and fully paid	No. of units	Amount (Rs. in million)	No. of units	Amount (Rs. in million)
Units having face value of Rs. 100/-				
At the beginning of the year	87,92,93,265	87,929.33	85,50,43,265	85,504.33
Issued during the year	14,24,00,000	28,619.50	2,42,50,000	2,425.00
Distributions (refer note 33)	-	(1,103.43)	-	-
At the end of the period / year	**1,02,16,93,265**	**1,15,445.40**	**87,92,93,265**	**87,929.33**

Details of unit holders holding more than 5% units:

	December 31, 2023 (Unaudited)		March 31, 2023 (Audited)	
	No. of units	% of total unit capital	No. of units	% of total unit capital
IRB Infrastructure Developers Limited	52,12,39,840	51%	44,84,39,840	51%
Anahera Investments Pte Ltd	25,56,23,181	25%	21,98,23,181	25%
Bricklayers Investments Pte Ltd	6,11,57,561	6%	5,27,57,561	6%
Chiswick Investments Pte Ltd	6,11,57,561	6%	5,27,57,561	6%
Stretford End Investments Pte Ltd	6,11,57,561	6%	5,27,57,561	6%
Dangenham Investments Pte Ltd	6,13,57,561	6%	5,27,57,561	6%

Details of Sponsor units	December 31, 2023 (Unaudited)		March 31, 2023 (Audited)	
IRB Infrastructure Developers Limited	52,12,39,840	51%	44,84,39,840	51%

Note : 15 : Subordinate Debt (Rs. in million)

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
At the beginning of the year	-	-
Increase / (decrease) during the period/ year	16,916.65	
At the end of the period / year	**16,916.65**	**-**

Note : 16 : Other equity

Attributable to the unit holders

(Rs. in million)

Other reserves	**December 31, 2023 (Unaudited)**	**March 31, 2023 (Audited)**
Retained earnings		
At the beginning of the year	(10,395.80)	(8,108.29)
Profit for the period / year	(3,846.93)	(2,272.18)
Interest Distribution (refer note 33)	(449.55)	-
Unit Issue expenses	(85.13)	(15.33)
At the end of the period / year	**(14,777.41)**	**(10,395.80)**
Total	**(14,777.41)**	**(10,395.80)**

Note : 17 : Borrowings

(Rs. in million)

	As at December 31, 2023 (Unaudited)	As at March 31, 2023 (Audited)
Non-current Borrowings		
Term loans		
Indian rupee loan from banks (secured)		
Project loans for SPVs	1,10,031.99	61,005.36
Less : current maturities expected to be settled within 12 month from balance sheet date	(737.46)	(639.16)
Total (a)	**1,09,294.53**	**60,366.20**
Indian rupee loan from financial institutions (secured)		
Project loans for SPVs	35,715.62	6,931.65
Less : current maturities expected to be settled within 12 month from balance sheet date	(362.50)	(9.75)
Total (b)	**35,353.12**	**6,921.90**
Non-convertible debentures (secured)	28,041.14	33,432.82
Less : current maturities expected to be settled within 12 month from balance sheet date	(53.38)	(130.59)
Total (c)	**27,987.76**	**33,302.22**
Less: Unamortised transaction cost **(d)**	(3,485.17)	(1,646.37)
Total non current borrowings (e = a + b + c + d)	**1,69,150.24**	**98,943.95**
Current Borrowings		
Short-term borrowings		
Current maturity of long term loans		
Indian rupee loan from banks (secured)	737.46	639.16
Indian rupee loan from financial institutions (secured)	362.50	9.75
Non convertible debentures (secured)	53.38	130.59
Interest accrued but not due on borrowings	10.08	5.43
(Unsecured, repayable on demand and interest free)		
Loan from related parties (refer note 38)	97.66	5,350.72
Total current borrowings (f)	**1,261.08**	**6,135.65**
Total borrowings (e+f)	**1,70,411.32**	**1,05,079.60**
Aggregate secured loans	1,70,303.58	99,723.46
Aggregate unsecured loans	97.66	5,350.72

Note : 17 : Borrowings (Continued)

(i) Project loans for SPVs

December 31, 2023: Rs. 1,73,788.75 million; March 31, 2023: Rs.1,01,369.83 million; pertains to term loans taken by SPV's (Special Purpose Vehicles) & Trust for Project financing.

Rate of interest

Rate of interest on the Indian Rupee loan from banks and financial institutions varies from 7.75% to 10.65% p.a. (March 31, 2023: 7.75% to 10.75% p.a.) and are secured by pledge of shares of its subsidiaries and subservient charge on the current assets of the trust.

Secured redeemable Non-convertible debentures carries interest rates which varies from 8.65% - 8.95% p.a.

Nature of security

i) Secured by first charge on the movable/immovable asset by way of mortgage/hypothecation; first charge on all intangible assets, assignment of all receivables; book debts, loans and advances extended by the Borrower to SPVs and all rights and interest in project, both present and future, excluding the Project Assets of respective companies;

ii) Secured by first charge over all the equity shares, Preference shares, Debentures representing 100% of such securities.

iii) Secured by first charge on the Escrow Account, Debt Service Reserve Account and any other reserves and other bank accounts of the respective Companies.

iv) Unconditional and irrecovable corporate guarantee by each of the RG SPV's, in a form and manner satisfactory to the Finance parties (the "Corporate Guarantee").

v) An irrevocable and unconditional corporate guarantee from IRB Infrastructure Developers Limited to meet shortfall (if any) between debt due and termination payments received from Concessioning Authority in case of termination of Concession Agreement for any reason in case of Project SPV's.

vi) Pledge of securities of obligators created pursuant to the terms of loan Agreement held as common security for the benefit of Rupee lenders.

Repayment terms

The Non Convertible Debentures of YATL are redeemable at par on in August 2027 for Rs.12,150 million and in September 2029 for Rs.3,000 million.

The Non Convertible Debentures of SYTL are redeemable at par on in September 2027 for Rs.4,910 million and in October 2029 for Rs.1,000 million.

The Indian rupee loans from Banks, Financial Institutions, Non Convertible Debentures(other than above) are repayable in structured monthly/quarterly installments such that the total tenor does not exceed 19 years and repayable as per the repayment schedule specified in common loan agreement with the Lenders.

Note : 18 : Trade payables (Current)

(Rs. in million)

	As at December 31, 2023 (Unaudited)	As at March 31, 2023 (Audited)
Total outstanding dues of micro enterprises and small enterprises	1.50	1.61
Total outstanding dues of creditors other than micro and small enterprises		
- Related parties (refer note 38)	4,170.89	13,812.18
- Others	3,774.85	1,491.69
Total	**7,947.24**	**15,305.48**

Note 19 : Other financial liabilities

(Rs. in million)

	December 31, 2023 (Unaudited)		March 31, 2023 (Audited)	
	Current	**Non-current**	**Current**	**Non-current**
Obligation for construction	184.86	-	1,102.31	-
Directors sitting fees payable	0.43	-	0.44	-
Deposit	1.19	-	1.18	-
Retention money payable				
- Related parties (refer note 38)	676.86	-	636.46	-
- Others	289.78	3.76	295.83	2.77
Revenue share payable	425.95	-	345.46	-
Other payable				
- Related parties (refer note 38)	41.93	37,489.82	167.70	35,778.03
- Others	2.93	-	-	-
Total	**1,623.92**	**37,493.58**	**2,549.37**	**35,780.80**

Note : 20 : Trade payables (Non Current)

(Rs. in million)

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Total outstanding dues of micro enterprises and small enterprises	-	-
Total outstanding dues of creditors other than micro and small enterprises		
- Related parties (refer note 38)	-	4,165.72
Total	**-**	**4,165.72**

Note 21 : Provisions

(Rs. in million)

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Major maintenance expenses	3,418.74	2,965.03
Total	**3,418.74**	**2,965.03**

The movement in provision for resurfacing expenses is as follows:

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Opening balance	2,965.03	1,350.57
Obligation on new toll projects	1,289.57	1,614.45
Utilised / reversed during the period / year	(835.86)	-
Closing balance	**3,418.74**	**2,965.03**

The above provisions are based on current best estimation of expenses that may be required to fulfill the resurfacing obligation as per the service concession agreement with regulatory authorities. It is expected that significant portion of the costs will be incurred over the period. The actual expense incurred may vary from the above. No reimbursements are expected from any sources against the above obligation.

Note 22 : Other current liabilities

(Rs. in million)

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Duties and taxes payable	30.33	64.12
Advance from customer- Others	61.51	34.03
Total	**91.85**	**98.15**

IRB Infrastructure Trust

Notes to Unaudited Condensed Interim Consolidated Financial Statements as at December 31, 2023

Note 23 : Revenue from operations

(Rs. in million)

	Nine months ended December 31, 2023 (Unaudited)	Nine months ended December 31, 2022 (Unaudited)
Contract revenue (road construction)	12,668.24	8,444.95
Income from toll collection (gross)	19,638.74	15,442.74
Less - Revenue Share to NHAI	(5,659.54)	(3,845.40)
Income arising out of toll collection (net)	13,979.20	11,597.34
Revenue share to NHAI- Fastag	(112.08)	(145.85)
Other operating revenue	-	0.23
Total	**26,535.36**	**19,896.67**

Note 24 : Other income

(Rs. in million)

	Nine months ended December 31, 2023 (Unaudited)	Nine months ended December 31, 2022 (Unaudited)
Interest income on		
- Bank deposits	367.14	104.16
- Others	1.60	6.37
Profit on sale of investments	77.82	42.12
Fair value gain on mutual funds	66.87	7.32
Other non operating income	14.42	1.35
Total	**527.86**	**161.32**

Note 25 : Operating expenses

(Rs. in million)

	Nine months ended December 31, 2023 (Unaudited)	Nine months ended December 31, 2022 (Unaudited)
Contract expenses	12,182.40	8,188.85
Operation and maintenance expenses	933.44	1,071.82
Site and other direct expenses	46.72	
Sub-contracting / Security expenses	4.81	0.35
Technical consultancy and supervision charges	33.92	44.26
Total	**13,201.29**	**9,305.29**

Note 26 : Depreciation and amortisation expenses

(Rs. in million)

	Nine months ended December 31, 2023 (Unaudited)	Nine months ended December 31, 2022 (Unaudited)
Depreciation on property, plant and equipment (refer note 4)	0.72	0.95
Amortisation on intangible assets (refer note 4)	2,614.32	1,957.61
Total	**2,615.04**	**1,958.56**

Note 27 : Finance cost

(Rs. in million)

	Nine months ended December 31, 2023 (Unaudited)	Nine months ended December 31, 2022 (Unaudited)
Interest expense		
- Banks and financial institutions	7,465.84	5,794.26
- Debentures	2,065.53	904.40
Other borrowing costs		
- Amortisation of Transaction cost	159.35	86.52
- Unwinding of discount on provision of MMR	232.58	107.28
- Interest unwinding on loan/retention money	36.70	36.70
- Interest unwinding of Trade Payable- Associates	187.67	610.50
- Others	198.46	149.25
Total	**10,346.13**	**7,688.90**

Note 28 : Other expenses

(Rs. in million)

	Nine months ended December 31, 2023 (Unaudited)	Nine months ended December 31, 2022 (Unaudited)
Power and fuel		
Rent	0.05	0.01
Rates and taxes	23.64	80.80
Travelling and conveyance	2.46	-
Membership & Subscription	0.05	-
Advertisement expenses	0.00	-
Director sitting fees	1.59	1.24
Corporate social responsibilities expenditure	1.60	-
Bank charges	6.47	1.81
Miscellaneous expenses	27.37	2.34
Total	**63.25**	**86.20**

Note 28A : Payment to auditor (including GST)

(Rs. in million)

	Nine months ended December 31, 2023 (Unaudited)	Nine months ended December 31, 2022 (Unaudited)
As auditors:		
- Statutory audit fees	1.23	1.05
- Limited review fees	2.20	2.03
In other capacity		
- Other services (certification fees)	0.11	0.63
Reimbursement of expenses	0.14	0.14
Total	**3.68**	**3.85**

Note 29 : Commitment and Contingencies

a. Leases

Rental expense recorded for short-term leases/ low-value lease was Rs.0.05 million (December 31, 2022: Rs.0.03 million)

b. Capital commitments

(Rs. in million)

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Estimated value of contracts in capital account remaining to be executed	77,403.87	14,295.07

IRB Kota Tollway Private Limited and IRB Gwalior Tollway Private Limited have been incorporated on January 01, 2024 and the commitment related to Project cost amounts to Rs.5,890 million and Rs.12,490 million respectively.

SPV's have entered into agreement for toll operations and management services with Sponsor and Subsidiary of Sponsor.

c. Contingent liabilities

(Rs. in million)

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Contigent liabilities	-	-
Total	-	-

UTL, CGTL and KGTL have filed Writ petition with Hon’ble Rajasthan High Court with prayer to commence payment of Premium to National Highways Authority of India (NHAI) six months post actual completion of the project construction work. The Hon’ble High Court prima facie agreed with the contention of these companies and had provided interim relief from payment of premium. Vide judgement order dated 25th August, 2021, the Hon’ble High Court found merit in the contention of the companies and has directed the parties to resolve the dispute under Arbitration. The said matter is currently pending under Arbitration.

Note 30 : Fair values

(Rs. in million)

	Carrying amount		Fair Value	
	December 31, 2023 (Unaudited)	**March 31, 2023 (Audited)**	**December 31, 2023 (Unaudited)**	**March 31, 2023 (Audited)**
Financial assets				
Financial assets measured at amortised cost				
Other Financial assets	2,251.48	1,448.89	2,251.48	1,448.89
Trade receivable	213.05	84.67	213.05	84.67
Cash and cash equivalents	687.54	731.31	687.54	731.31
Other Bank balances	9,453.30	4,866.69	9,453.30	4,866.69
Financial assets measured at fair value through statement of Profit & Loss				
Investments (Quoted)	7,028.46	1,283.09	7,095.52	1,283.09
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	7,947.24	19,471.20	7,947.24	19,471.20
Borrowings (net of transaction cost)	1,70,411.32	1,05,079.60	1,70,411.32	1,05,079.60
Other financial liabilities	1,627.68	2,552.14	1,627.68	2,552.14
Financial liabilities measured at fair value through statement of Profit & Loss				
Other financial liabilities	37,489.82	35,778.03	37,489.82	35,778.03

The management assessed that the fair value of other financials assets, trade receivables, cash and cash equivalents, other bank balance, trade payables, borrowings and other financial liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the Group has determined that market participants would take into account when pricing the investments.

Note 31 : Fair value hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price in active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly.

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

Quantitative disclosures fair value measurement hierarchy for financial instruments as at December 31, 2023:

(Rs in million)

	As on December 31, 2023 (Unaudited)	Fair value measurement at end of the reporting period using		
		Level 1	**Level 2**	**Level 3**
Assets				
Investments (Quoted)	7,095.52	7,095.52	-	-
Liabilities				
Other financial liabilities	37,489.82	-	-	37,489.82

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2023:

(Rs in million)

	As on March 31, 2023 (Audited)	Fair value measurement at end of the reporting period using		
		Level 1	**Level 2**	**Level 3**
Assets				
Investments (Quoted)	1,283.09	1,283.09	-	-
Liabilities				
Other financial liabilities	35,778.03	-	-	35,778.03

There has been no transfer between Level 1, Level 2 & Level 3 during the period.

Sensitivity: Higher probability by 5% and lower discount rate by 0.5% will increase the fair value by Rs.4,446.51 million (31 march 2023 - Rs.4,166.87 million). Lower probability by 5% and higher discount rate by 0.5% will reduce fair value by Rs.4,197.70 million (31 March 2023 - Rs.3,946.06 million).

Fair value movement for Payable to IRB Infrastructure Developers Limited is as under:

(Rs in million)

	December 31, 2023 (Unaudited)	**March 31, 2023 (Audited)**
Opening balance as at 1st April 2023 (Previous period: 1st April 2022)	35,778.03	35,168.79
Add: Recognised during the period/ year	1,676.37	560.53
Less: Payment of deferred consideration	-	-
Add: Adjustment on account of interest unwinding	35.42	48.71
Closing balance of payable as on December 31, 2023 (Previous period: March 31, 2023)	**37,489.82**	**35,778.03**

Note 32 : Liquidity Risk

Liquidity risk is the risk that the Trust may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Trust's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements. The Trust closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt from banks at an optimised cost.

The table below summarises the maturity profile of the Trust's financial liabilities based on contractual undiscounted payments:

(Rs. in million)

As at December 31, 2023 (Unaudited)	**Carrying amount**	**Total**	**On Demand**	**Less than 1 year**	**1 to 5 years**	**> 5 years**
Borrowings (Gross of unamortised transaction cost)	1,73,896.49	1,73,896.49	97.66	1,163.42	16,521.37	1,56,114.04
Other financial liabilities	39,117.50	39,117.50	-	1,623.92	37,493.58	-
Trade payables	7,947.24	7,947.24	-	7,947.24	-	-
Total	**2,20,961.23**	**2,20,961.23**	**97.66**	**10,734.58**	**54,014.95**	**1,56,114.04**

(Rs. in million)

As at March 31, 2023 (Audited)	**Carrying amount**	**Total**	**On Demand**	**Less than 1 year**	**1 to 5 years**	**> 5 years**
Borrowings (Gross of unamortised transaction cost)	1,06,725.97	1,06,725.97	5,350.72	784.93	17,853.83	82,736.49
Other financial liabilities	38,330.17	38,330.17	-	2,549.37	35,780.80	-
Trade payables	15,305.48	15,305.48	-	15,305.48	-	-
Total	**1,60,361.62**	**1,60,361.62**	**5,350.72**	**18,639.78**	**53,634.63**	**82,736.49**

Note 33 : Distribution made

(Rs in million)

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Distributed during the period as :		
Interest	449.55	-
Return of Capital	1,103.43	-
	1,552.98	-

Note: The Board of Directors of the Investment Manager have declared 1st Distribution of Rs.1.52 per unit which comprises of Rs.0.44 per unit as interest and Rs. 1.08 per unit as return of capital in their meeting held on October 25, 2023.

Note 34 : Revenue share / premium payment to NHAI

(a) During the period ended December 31, 2023, the Group has paid/accrued Rs. 5,659.55 millions (December 31, 2022, Rs. 3845.40 millions) as Revenue Share (Additional Concession Fee) to National Highways Authority of India (“NHAI”) out of its toll collection in accordance with the Concession Agreements entered with NHAI. Income from Operations in the financials for the above periods is net off the above Revenue Share to NHAI.

(b) During the year ended March 31, 2017, AE Tollway Limited (AETL) has entered into a Concession agreement (CA) with NHAI for a period of 24 years. As per the terms of the CA, AETL has agreed to pay a premium in the form of "Additional Concession Fee" equal to Rs. 810.00 millions for the first year and each subsequent year such premium shall be determined by increasing the amount of premium in the respective year by an additional 5% as compared to the immediately preceding year. Management based on the legal opinion obtained and their evaluations of the terms of the CA, believes that such premium payable is restricted to the toll collection during the year and is in the form of revenue sharing arrangement. Accordingly, the premium payable for the year is accounted for as revenue share. The said treatment has been followed in case of KGTL, UTL, CGTL and IRBHM where premium payment has commenced.

Note 35 : Details of Project management fees and Investment management fees

i) Project Management Fees

In accordance with the Project Implementation Agreements, the fees and remuneration payable by the Project SPVs to the Project Manager has been worked out and agreed upon for the duration of current financial year, between the Project Manager, Investment Manager and the respective Project SPV, on an arm’s length basis, after taking into account the extent of work to be done in respect of maintenance and other services to be provided by the Project Manager to such Project SPV.

ii) Investment Management Fees

Pursuant to a resolution dated July 4, 2023 of the Board of Directors of the Investment Manager and a resolution dated July 27, 2023 of the Unitholders, the Management Fees have been revised to be equivalent to 110% of the cost incurred by the Investment Manager in connection with providing investment management services to the Trust including routine administrative and operational expenses (exclusive of any out of pocket expenses, reimbursements and taxes).

Note 36 : Income Tax

Reconciliation of tax expenses and the accounting of profit multiplied by Indian Domestic tax rate for nine months ended December 31, 2023 and December 31, 2022 are:

(Rs in million)

	Nine months ended December 31, 2023 (Unaudited)	Nine months ended December 31, 2022 (Unaudited)
Profit Before tax	(4,211.24)	(1,530.02)
Tax rate	29.12%	29.12%
Expected income tax at India's statutory rate	(1,226.31)	(445.54)
Effect of unused tax losses and tax offsets not recognised as deferred tax assets	882.97	768.01
Difference in tax rate as per new regime as compared to normal tax rates	(18.49)	(58.76)
Additional Prior Period Taxes booked in current year for current tax of prior years	5.96	-
Adjustments recognised in the current year in relation to the Deferred tax of prior years	-	(339.00)
Others	(8.57)	(19.01)
Income tax expense reported in statement of Profit and loss	**(364.44)**	**(94.30)**
Effective Tax Rate	**8.65%**	**6.16%**

No deferred tax assets have been recognised on losses incurred in SPV's due to uncertainity of future taxable business income.

Note 37: Capitalisation Statement

(Rs in million)

Particulars	**December 31, 2023 (Unaudited)**
Unitholders’ Funds:	
Unit Capital	1,15,445.40
Subordinate Debt	16,916.65
Other Equity	(14,777.41)
Non-Controlling Interest	1.39
Total Shareholders’ Funds	**1,17,586.03**
Borrowings	
Borrowings from related parties	97.66
Long term borrowings	1,69,150.24
Current maturities of long term borrowings (including interest accrued but not due)	1,163.42
Total Debt	**1,70,411.32**
Total Capitalisation	**2,87,997.35**

IRB Infrastructure Trust
Notes to Unaudited Condensed Interim Consolidated Financial Statements as at December 31, 2023

Note 38 : Related party disclosures

I. List of Related parties of the Trust

1	Parties to the InvIT	IRB Infrastructure Developers Limited (Sponsor Group and Project Manager)
		MMK Toll Road Private Limited (Investment Manager)
		IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
2	Associates, Promoters, Directors and Partners of the persons mentioned in clause 1	As per table below #

 # List of Associates, Promoters, Directors and Partners of the persons mentioned in clause 1

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manager)**	**MMK Toll Road Private Limited (Investment Manager)**	**IDBI Trusteeship Services Limited (Trustee of IRB Infrastructure Trust)**
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Virendra D. Mhaiskar (HUF)	IRB Infrastructure Developers Limited (IRBIDL)	IDBI Bank Limited LIC Corporation Limited General Insurace Corporation
Directors	Mr. Virendra D. Mhaiskar, Chairman and Managing Director Mrs. Deepali V. Mhaiskar, Whole Time Director Mr. Jose Tamariz Martel Goncer Mr. Ravindra Dhariwal	Mr. Virendra D Mhaiskar Mr. Kunnasagaran Chinniah Mr. Boon Chin Hau (w.e.f . 31.05.2023) Mr. Aryan Mhaiskar (w.e.f.31.05.2023)	Mr. Jayakumar Subramonia Pillai Mr. Pradeep Kumar Jain Mrs. Jayashree Vijay Ranade Mr. Pradeep Kumar Malhotra Ms. Baljinder Kaur Mandal
	Independent directors	**Independent directors**	
	Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Ms. Priti Savla, Independent Director	Mr. K G Krishnamurthy Mrs.Ranjana Paranjape Mr. Nagendraa Parakh (w.e.f. 31.05.2023) Mr. Amyn Jassani (w.e.f. 31.05.2023)	

IRB Infrastructure Trust
Notes to Unaudited Condensed Interim Consolidated Financial Statements as at December 31, 2023

Note 38 : Related party disclosures
I. List of Related parties of the Trust (Continued)
 # List of Associates, Promoters, Directors and Partners of the persons mentioned in clause 1 (Continued)

Associates	**A) Holding Company of Sponsor / Project Manager** IRB Holding Private Limited (Formerly Mhaiskar Ventures Private Limited) **B) Subsidiaries/JV's of Sponsor / Project Manager** 1. Ideal Road Builders Private Limited (IRBPL) 2. Mhaiskar Infrastructure Private Limited (MIPL) 3. Modern Road Makers Private Limited (MRMPL) 4. Aryan Toll Road Private Limited (ATRPL) 5. ATR Infrastructure Private Limited (ATRFL) 6. IRB Infrastructure Private Limited (IRBFL) 7. Thane Ghodbunder Toll Road Private Limited (TGTRPL) 8. Aryan Infrastructure Investments Private Limited (AIIPL) 9. IRB MP Expressway Private Limited (formerly known as NKT Road and Toll Private Limited) 10. MMK Toll Road Private Limited (MMK) (Entity with Joint Control) 11. IRB Kolhapur Integrated Road Development Company Private Limited (IRBK) 12. Aryan Hospitality Private Limited (AHPL) 13. IRB Sindhudurg Airport Private Limited (IRBSA) 14. IRB Goa Tollway Private Limited (IRB Goa) 15. IRB PS Highway Private Limited (formerly known as MRM Highways Private Limited) (IRBPS) 16. IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV) 17. MRM Mining Private Limited (Formerly "J J Patel Infrastructural and Engineering Private Limited") (Subsidiary of MRMPL) 18. GE1 Expressway Private Limited (formerly known as IRB PP Project Private Limited) 19. VK1 Expressway Limited (VK1) (upto October 12, 2022) 20. Pathankot Mandi Highway Private Limited 21. Chittoor Thachur Highway Private Limited 22. Meerut Budaun Expressway Limited - Subsidiary upto October 14, 2022 and Entity with Joint Control w.e.f. October 15,2022 23. VM7 Expressway Private Limmited
	C) Other Associate Companies of Sponsor / Project Manager 1. Virendra D. Mhaiskar (HUF) 2. VCR Toll Services Private Limited 3. VDM Ventures Private Limited 4. DEUX Farming Films Private Limited 5. IRB Charitable Foundation **Key Managerial personnel (Only with whom Trust had transactions during the period/ there was balance outstanding at the year end)** 1. Ms. Shilpa Todankar 2. Mr. Abhay Phatak 3. Mr. Darshan Sangurdekar 4. Mr. Omprakash Singh 5. Mr. Chandrashekhar Kaptan 6. Mrs. Ranjana Paranjape 7. Mrs. Arati Taskar 8. Mr. Sudhir Rao Hoshing 9. Mr. Rajpaul Sharma 10. Mr. Amitabh Murarka 11. Devendra Ranka (Appointed as CFO) 12. Jaypraksah Nandi (Appointed as CEO) 13. Mr. Tushar Kawedia 14. Swati Chandekar (Appointed as CS of Yedeshi Aurangabad Tollway Limited)

Note 38 : Related party disclosures

II. Related Party Transactions

(Rs. in million)

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidiaries of Sponsor and Project Manager		Key Managerial personnel		Trustee of IRB Infrastructure Trust	
		31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)
1	**Contract expenses**	**10,182.51**	**1,113.81**	**-**	**-**	**806.29**	**689.11**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	10,182.51	1,113.81	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	806.29	689.11	-	-	-	-
2	**Interest Distribution**	**229.35**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	229.35	-	-	-	-	-	-	-	-	-
3	**Capital Reduction**	**562.94**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	562.94	-	-	-	-	-	-	-	-	-
4	**Expenses incurred on our behalf**	**4.10**									
	IRB Infrastructure Developers Limited	4.10									
5	**Reimbursement of expenses incurred on our behalf**	**1.28**									
	IRB Infrastructure Developers Limited	1.28									
6	**Operation & Main. Expenses**	**3,815.46**	**2,047.15**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	3,815.46	2,047.15	-	-	-	-	-	-	-	-
7	**Finance Cost -Interest unwinding on Trade payable**	**-**	**-**	**-**	**-**	**187.67**	**541.65**	**-**	**-**	**-**	**-**
	Modern Road Makers Private Limited	-	-	-	-	187.67	541.65	-	-	-	-
8	**Interest unwinding on Trade Payable - TCR**	**-**	**-**	**-**	**-**	**172.03**	**-**	**-**	**-**	**-**	**-**
	Modern Road Makers Private Limited	-	-	-	-	172.03	-	-	-	-	-
9	**Sub-ordinate debts (Unsecured & interest free)**	**16,916.65**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	16,916.65	-	-	-	-	-	-	-	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	-	-	-	-	-	-

Note 38 : Related party disclosures

II. Related Party Transactions

(Rs. in million)

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidiaries of Sponsor and Project Manager		Key Managerial personnel		Trustee of IRB Infrastructure Trust	
		31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)
10	**Expenses incurred on behalf of others**	**-**	**-**	**0.45**	**-**	**0.01**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	-	-	-	-	-	-	-	-	-	-
	MMK Toll Road Private Limited	-	-	0.45	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	0.01	-	-	-	-	-
11	**Reimbursement of Expenses incurred on behalf of others**	**16.68**	**-**	**0.53**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	16.68	-	-	-	-	-	-	-	-	-
	MMK Toll Road Pvt Limited	-	-	0.53	-	-	-	-	-	-	-
12	**Mobilisation advances given**	**802.50**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	802.50	-	-	-	-	-	-	-	-	-
13	**Trading Purchase**	**-**	**-**	**-**	**-**	**-**	**588.05**	**-**	**-**	**-**	**-**
	Modern Road Makers Private Limited	-	-	-	-	-	588.05	-	-	-	-
14	**Advance received including BG margin payable**	**55.27**	**-**	**-**	**-**	**0.03**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	55.27	-	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	0.03	-	-	-	-	-
15	**Advance given including BG margin given**	**713.11**	-	-	-	**21.41**	-	-	-	-	-
	IRB Infrastructure Developers Limited	713.11	-	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	21.41	-	-	-	-	-
16	**Trustee Fees**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.12**	**-**
	IDBI Trusteeship Services Limited	-	-	-	-	-	-	-	-	0.12	-

Note 38 : Related party disclosures

II. Related Party Transactions

(Rs. in million)

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidiaries of Sponsor and Project Manager		Key Managerial personnel		Trustee of IRB Infrastructure Trust	
		31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)
17	**Fair value loss on measurement of other payable**	**1,677.04**	**356.63**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	1,677.04	356.63	-	-	-	-	-	-	-	-
18	**Interest Unwinding on Loan Taken**	-	-	-	-	**36.70**	**36.70**	-	-	-	-
	Mhaiskar Infrastrcture Private Limited	-	-	-	-	36.70	36.70	-	-	-	-
19	**Unsecured Loan taken**	**400.00**	**1,264.98**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	400.00	1,264.98	-	-	-	-	-	-	-	-
20	**Unsecured Loan repaid**	**5,750.72**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	5,750.72	-	-	-	-	-	-	-	-	-
21	**Units Issued**	**14,631.32**	**1,236.75**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	14,631.32	1,236.75	-	-	-	-	-	-	-	-
22	**BG Margin paid on behalf of others**	**30.95**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	30.95	-	-	-	-	-	-	-	-	-
23	**Additional Intangible Asset**	**-**	**-**	**-**	**-**	**-**	**104.86**	**-**	**-**	**-**	**-**
	Modern Road Makers Private Limited	-	-	-	-	-	104.86	-	-	-	-
24	**Investment Management Fees**	**-**	**-**	**122.60**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	MMK Toll Road Pvt Limited	-	-	122.60	-	-	-	-	-	-	-

Note 38 : Related party disclosures

II. Related Party Transactions

(Rs. in million)

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidiaries of Sponsor and Project Manager		Key Managerial personnel		Trustee of IRB Infrastructure Trust	
		31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)	31/12/2023 (Unaudited)	31/12/2022 (Unaudited)
25	**Director sitting fees paid**	**-**	**-**	**-**	**-**	**-**	**-**	**1.88**	**1.25**	**-**	**-**
	Mrs. Arati Taskar	-	-	-	-	-	-	0.16	0.05	-	-
	Mr. Darshan Sangurdekar	-	-	-	-	-	-	0.13	0.14	-	-
	Mr.Omprakash Singh	-	-	-	-	-	-	0.15	0.14	-	-
	Mr. Sudhir Hoshing	-	-	-	-	-	-	0.12	0.05	-	-
	Mr. C S Kaptan	-	-	-	-	-	-	0.32	0.23	-	-
	Ms. Shilpa Todankar	-	-	-	-	-	-	0.34	0.34	-	-
	Mr. Tushar Kawedia							0.07	-		
	Mr. Rajpaul S. Sharma							0.12	-		
	Mrs.Ranjana Paranjape	-	-	-	-	-	-	0.09	0.09	-	-
	Mr. Abhay Pathak	-	-	-	-	-	-	0.18	0.16	-	-
	Mr. Amitabh Murarka	-	-	-	-	-	-	0.20	0.05	-	-

Note 38 : Related party disclosures
III. Related party balances

(Rs. in million)

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidiaries of Sponsor and Project Manager		Key Managerial personnel		Trustee of IRB Infrastructure Trust	
		31/12/2023 (Unaudited)	31/03/2023 (Audited)	31/12/2023 (Unaudited)	31/03/2023 (Audited)	31/12/2023 (Unaudited)	31/03/2023 (Audited)	31/12/2023 (Unaudited)	31/03/2023 (Audited)	31/12/2023 (Unaudited)	31/03/2023 (Audited)
1	**Short-term borrowings**	**-**	**477.81**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	-	477.81	-	-	-	-	-	-	-	-
2	**Subordinated debt (unsecured and interest free)**	**16,916.65**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	16,916.65	-	-	-	-	-	-	-	-	-
3	**Trade payable**	**5,900.05**	**5,423.13**	**101.45**	**78.54**	**272.83**	**12,475.69**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	5,900.05	5,423.13	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	272.83	12,475.69	-	-	-	-
	MMK Toll Road Private Limited	-	-	101.45	78.54	-	-	-	-	-	-
4	**Mobilisation advances**	**301.37**	**33.68**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	301.37	33.68	-	-	-	-	-	-	-	-
5	**Advance given**	**1,123.96**	**451.18**	**-**	**-**	**21.41**	**0.03**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	1,123.96	451.18	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	21.41	0.03	-	-	-	-
6	**Advance taken**	**81.57**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	81.57	-	-	-	-	-	-	-	-	-
7	**BG Margin Money Receivable**	**30.95**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	30.95	-	-	-	-	-	-	-	-	-
8	**Retention payable**	**653.70**	**-**	**-**	**-**	**23.17**	**281.35**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	653.70	-			-	-				
	Modern Road Makers Private Limited	-	-	-	-	23.17	281.35	-	-	-	-
9	**Deferred Consideratrion payable**	**33,771.95**	**32,246.65**	**-**	**-**	**3,717.38**	**3,697.39**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	33,771.95	32,246.65	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	1,784.13	1,800.84	-	-	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	1,544.86	1,544.86	-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	-	-	-	388.39	351.69	-	-	-	-
10	**Other payable (Exp incurred on behalf of others)**	**25.72**	**1.77**	**-**	**-**	**16.70**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	25.72	1.77	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	16.70	-	-	-	-	-
11	**Unsecured Loan**	**-**	**4,872.91**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	-	4,872.91	-	-	-	-	-	-	-	-
12	**Trade Receivable**	**-**	**-**	**-**	**-**	**0.51**	**0.61**	**-**	**-**	**-**	**-**
	Modern Road Makers Private Limited	-	-	-	-	0.51	0.61	-	-	-	-
13	**Expense payable**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.51**
	IDBI Trusteeship Services Limited	-	-	-	-	-	-	-	-	-	0.51
14	**Other receivable**	**-**	**-**	**-**	**0.08**	**0.01**	**-**	**-**	**-**	**-**	**-**
	MMK Toll Road Private Limited	-	-	-	0.08	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	0.01	-	-	-	-	-

Note 38 : Related party disclosures
III. Related party balances

(Rs. in million)

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidiaries of Sponsor and Project Manager		Key Managerial personnel		Trustee of IRB Infrastructure Trust	
		31/12/2023 (Unaudited)	31/03/2023 (Audited)	31/12/2023 (Unaudited)	31/03/2023 (Audited)	31/12/2023 (Unaudited)	31/03/2023 (Audited)	31/12/2023 (Unaudited)	31/03/2023 (Audited)	31/12/2023 (Unaudited)	31/03/2023 (Audited)
15	**Director sitting fees Payable**	**-**	**-**	**-**	**-**	**-**	**-**	**0.43**	**0.44**	**-**	**-**
	Mrs. Aarti Taskar	-	-	-	-	-	-	0.03	0.01	-	-
	Mr. Darshan Sangurdekar	-	-	-	-	-	-	0.02	0.05	-	-
	Mr. Omprakash Singh	-	-	-	-	-	-	0.04	0.04	-	-
	Mr. Sudhir Hoshing	-	-	-	-	-	-	0.04	0.01	-	-
	Mr. Jitendra Sharma	-	-	-	-	-	-	-	0.02	-	-
	Mr. Rajpaul S. Sharma	-	-	-	-	-	-	0.01	-	-	-
	Mr. C S Kaptan	-	-	-	-	-	-	0.09	0.08	-	-
	Miss Shilpa Todankar	-	-	-	-	-	-	0.09	0.13	-	-
	Mr. Abhay Pathak	-	-	-	-	-	-	0.05	0.07	-	-
	Mr. Amitabh Murarka	-	-	-	-	-	-	0.05	0.01	-	-
	Mr. Tushar Kawedia	-	-	-	-	-	-	0.02	-	-	-
	Mrs. Ranjana Paranjape	-	-	-	-	-	-	0.02	0.03	-	-

IRB Infrastructure Trust
Notes to Unaudited Condensed Interim Consolidated Financial Statements as at December 31, 2023

Note 39 : Projectwise Operating Cash Flows

(Rs. in million)

Particulars	UTPL	AETL	WCTL	KGTL	KTL	PDTPL	CGTL	HMTL	SYTL	YATL	IGEPL	ILTPL	STPL
Cash flow from operating activities													
Profit Before Tax	(1,159.69)	(2,623.08)	(2,575.41)	(1,534.79)	(1,389.00)	467.86	(865.09)	(1,353.72)	(621.41)	(1,136.53)	(640.75)	(0.03)	73.43
Adjustments :													
Depreciation and amortisation expenses	311.15	252.10	155.89	188.86	153.09	173.45	296.11	336.55	127.68	426.13	194.01	-	-
Resurfacing expenses	(93.07)	(74.60)	-	121.07	(134.01)	-	95.73	256.70	49.75	109.02	-	-	-
Finance costs	1,201.54	2,819.35	2,890.46	1,387.46	1,974.47	536.76	1,128.29	1,197.57	1,309.19	2,389.27	2,931.85	-	-
Fair Value gain on Mutual Funds	0.05	0.16	-	(0.07)	(0.01)	(0.26)	(0.03)	0.01	0.13	(0.16)	(5.83)	-	-
(Gain) / loss on sale of Investment	(3.28)	(2.56)	(1.46)	(7.75)	(2.16)	(2.00)	(5.05)	(17.37)	(3.86)	(5.21)	(11.48)	-	-
Dividend Income on other investments	-	-	-	-	-	-	(0.02)	(0.02)	-	-	-	-	-
Interest Income on												-	-
- Bank deposits	(22.29)	(18.60)	(14.76)	(12.59)	(12.73)	(1.76)	(23.91)	(23.50)	(41.42)	(71.72)	(72.93)	-	-
- Others	-	-	(0.01)	(0.60)	(0.50)	-	-	-	(0.25)	(0.23)	(0.86)	-	-
Operating profit/(loss) before working capital changes	**234.40**	**352.76**	**454.71**	**141.60**	**589.15**	**1,174.06**	**626.04**	**396.22**	**819.81**	**1,710.56**	**2,394.01**	**(0.03)**	**73.43**
Movement in working capital:													
Decrease/(increase) in Trade receivables		-	-	-	-	(98.05)	-	-	26.78	(57.11)	-	-	-
Decrease/(increase) in others financial assets	(40.13)	(36.68)	(69.57)	(22.89)	(29.26)	(157.46)	(7.26)	(264.03)	(28.82)	(4.32)	(39.46)	-	(6.96)
Decrease/(increase) in other assets	(1.77)	(16.93)	(88.14)	(34.35)	(9.37)	722.96	23.73	229.97	(0.31)	(7.80)	(301.77)	(0.62)	(106.60)
Increase/(decrease) in trade payables	(2,770.49)	112.48	(1,525.73)	(3,111.26)	125.58	(1,808.52)	(2,462.78)	(3,400.81)	(220.04)	(482.75)	1,479.63	0.01	2,329.53
Increase/(decrease) in other financial liabilities	(22.13)	(2,094.34)	(12.63)	14.00	(997.55)	111.94	(44.66)	128.16	11.94	(746.68)	5.97	0.01	24.64
Increase/(decrease) in other liabilities	(0.01)	0.77	(204.19)	(0.06)	(3.15)	8.34	(23.63)	(0.44)	2.89	10.85	0.67	-	0.02
Decrease/(increase) in other non current assets	-	-	166.07	-	-	-	-	-	-	-	-	-	-
Cash generated from/(used in) operations	**(2,600.13)**	**(1,681.93)**	**(1,279.48)**	**(3,012.96)**	**(324.61)**	**(46.74)**	**(1,888.56)**	**(2,910.94)**	**612.25**	**422.76**	**3,539.06**	**(0.63)**	**2,314.07**
Direct taxes paid (net of refunds)	(12.86)	(3.70)	(3.44)	(0.15)	11.39	(24.17)	(11.40)	(7.18)	(4.90)	(7.51)	(12.06)	-	-
Net cash flows from/(used in) operating activities	**(2,612.99)**	**(1,685.63)**	**(1,282.91)**	**(3,013.11)**	**(313.21)**	**(70.91)**	**(1,899.95)**	**(2,918.12)**	**607.35**	**415.25**	**3,527.00**	**(0.63)**	**2,314.07**

Note 40 : Disclosure pursuant to Appendix - A to Ind AS 11 - " Service Concession Arrangements" ('SCA')

(A) Disclosures with regard to Toll Collection Rights (Intangible Assets)

Sr. No.	Name of Concessionaire	Type of Concession	Start of concession period under concession agreement (Appointed date)	End of concession period under concession agreement	Period of concession since the appointed date	Construction completion date or expected construction completion date, as applicable
1	IRB Westcoast Tollway Limited	BOT	March 3, 2014	March 2, 2042	28 years	June 30, 2022
2	Solapur Yedeshi Tollway Limited	BOT	January 21, 2015	January 20, 2044	29 years	October 15, 2019
3	Yedeshi Aurangabad Tollway Limited	BOT	July 1, 2015	June 30, 2041	26 years	September 24, 2020
4	Kaithal Tollway Limited	BOT	July 15, 2015	July 14, 2042	27 years	March 29, 2019
5	AE Tollway Limited	BOT	August 1, 2016	July 31, 2040	24 years	November 24, 2020
6	Udaipur Tollway Limited	BOT	September 3, 2017	September 2, 2038	21 years from Appointed Date	June 01, 2021
7	CG Tollway Limited	BOT	November 4, 2017	November 3, 2037	20 years from Appointed Date	August 14, 2021
8	Kishangarh Gulabpura Tollway Limited	BOT	February 21, 2018	February 20, 2038	20 years from Appointed Date	June 30, 2022
9	IRB Hapur Moradabad Tollway Limited	BOT	May 28, 2019	May 26, 2041	22 years from Appointed Date	June 30, 2022
10	Palsit Dankuni Tollway Private Limited	BOT	April 2, 2022	April 1, 2039	17 years from Appointed Date	Tolling & Construction
11	IRB Golconda Expressway Private Limited*	TOT	August 12, 2023	August 11, 2053	30 years from Appointed Date	NA
12	Samakhiyali Tollway Private Limited	BOT	December 28, 2023	December 27, 2043	20 years from Appointed Date	Tolling & Construction
13	IRB Lalitpur Tollway Private Limited#	TOT	-	-	-	-

* Upfront concession fee of Rs. 73,800 million
# Upfront concession fee of Rs. 44,280 million & appointed date pending

Note:

The above BOT/ DBFOT projects shall have following rights/ obligations in accordance with the Concession Agreement entered into with the Respective Government Authorities:-

a. Rights to use the Specified assets
b. Obligations to provide or rights to expect provision of services
c. Obligations to deliver or rights to receive at the end of the Concession.

Note 41 :Disclosure as per Ind AS 115

a) Disaggregation of revenue from contracts with customers

The Group believes that the information provided below for Revenue from Operations, is sufficient to meet the disclosure objectives with respect to disaggregation of revenue under Ind AS 115, Revenue from Contracts with Customers and also refer note (b).

(Rs. in million)

	Nine months ended December 31, 2023 (Unaudited)	Nine months ended December 31, 2022 (Unaudited)
Contract Revenue (refer note b below)	12,668.24	8,444.95
Income from toll collection (net) (refer note b below)	13,867.12	11,451.49
Total	**26,535.36**	**19,896.44**

b) Reconciliation of revenue as per Ind AS 115

(Rs. in million)

	Nine months ended December 31, 2023 (Unaudited)	Nine months ended December 31, 2022 (Unaudited)
Contract Revenue		
Construction revenue (Utility shifting & Construction work)	12,668.24	8,444.95
Total	**12,668.24**	**8,444.95**
Income from toll collection		
Revenue total collected	19,638.74	15,442.74
Less: NHAI Premium	(5,659.54)	(3,845.40)
Less : NHAI Revenue share - Double user fee	(112.08)	(145.85)
Total	**13,867.12**	**11,451.49**

Note 42: Earnings Per Unit (EPU)
EPU amounts are calculated by dividing the profit for the period attributable to unit holders by the weighted average number of units outstanding during the period.

The following reflects the income and share data used in the EPU computations:

	Nine months ended December 31, 2023 (Unaudited)	Nine months ended December 31, 2022 (Unaudited)
Profit attributable to unit holders for earnings (Rs in million)	(3,846.80)	(1,435.72)
Weighted average number of Units for EPU	95,38,59,083	87,75,29,629
Face value per unit (in Rs)	100.00	100.00
Earnings per unit (in Rs.)*		
Basic	(4.03)	(1.64)
Diluted	(4.03)	(1.64)

* Not annualised

Note 43 : Segment reporting
The Group's activities comprise of Toll collection in various parts of India based on the guiding principles given in Ind AS - 108 "Operating Segments", this activity falls within a single operating segment and accordingly the disclosures of the standard have not separately been given.

Note 44 : Debt payment history

(Rs in million)

Particulars	Opening Balance as on April 1, 2023	Loan availed during the period	Loan repaid during the period	Closing Balance as at December 31, 2023 (Unaudited)
Secured loan from Bank and Financial Institution	67,937.01	1,20,731.67	(42,921.06)	1,45,747.62
Debenture	33,432.82	-	(5,391.68)	28,041.14
Loan from related party	5,350.72	97.66	(5,350.72)	97.66
Total	**1,06,720.55**	**1,20,829.33**	**(53,663.46)**	**1,73,886.42**

Particulars	Opening Balance as on April 1, 2022	Loan availed during the period	Loan repaid during the period	Closing Balance as at March 31, 2023 (Audited)
Secured loan from Bank and Financial Institution	88,627.04	5,109.36	(25,799.39)	67,937.01
Debenture	5,497.18	28,060.00	(124.36)	33,432.82
Loan from related party	4,085.74	1532.48	(267.50)	5,350.72
Total	**98,209.96**	**34,701.84**	**(26,191.25)**	**1,06,720.55**

Note 45 : Subsequent Events
The Board of Directors of the Investment Manager have declared 2nd Distribution of Rs.2.82 per unit towards return of capital in their meeting held on January 25, 2024, subsequently February 1, 2024 has been fixed as the record date for the purpose of payment of this distribution.

Note 46 : Previous year comparatives
Previous year's figures have been converted to make them comparable with the current period as per InvIT regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

Place: Mumbai
Date: March 08, 2024

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place : Mumbai
Date: March 08, 2024

gokhale & sathe (regd.)
chartered accountants
308/309, Udyog Mandir No. 1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016

INDEPENDENT AUDITOR'S REPORT

To the Unit Holders of IRB Infrastructure Trust

REPORT ON THE AUDIT OF THE CONSOLIDATED IND AS FINANCIAL STATEMENTS

OPINION

We have audited the accompanying Consolidated Ind AS Financial Statements of IRB Infrastructure Trust ("the InvIT" or "the Trust") and its subsidiaries (the Trust and its subsidiaries together referred to as "the Group"), which comprise the Consolidated Balance Sheet as at March 31, 2023, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income), the Consolidated Statement of Cash Flows, the Consolidated Statement of Changes in Unit Holder's Equity for the year then ended and the Consolidated Statement of Net Assets at Fair value as at March 31, 2023, the Consolidated Statement of Total Returns at Fair Value and the consolidated statement of Net Distributable Cash Flows ('NDCFs') of the trust and each of the subsidiaries for the year then ended, and notes to the Consolidated Financial Statements including a Summary of Significant Accounting Policies and Other Explanatory Information (hereinafter referred to as "the Consolidated Financial Statements").

In our opinion and to the best of our information and according to the explanations given to us and based on the consideration of reports of other auditors on separate financial statements and on the other financial information of the subsidiaries, the aforesaid consolidated financial statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI lnvlT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards prescribed under Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015 ("Ind AS"), as amended and other accounting principles generally accepted in India, of the consolidated State of Affairs of the Group as at March 31, 2023, its Consolidated Loss and Total Comprehensive Loss, consolidated movement of the unit holders' funds and its consolidated cash flows for the year ended March 31, 2023, its consolidated Net Assets at fair value as at March 31, 2023, its consolidated total Returns at fair value and the Net Distributable Cash Flows ('NDCFs') of the trust and each of the subsidiaries for the year ended March 31, 2023.

BASIS FOR OPINION

We conducted our audit of the Consolidated Financial Statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the consolidated IND AS financial statements section of our report. We are independent of the Group in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Consolidated Financial Statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the Consolidated Financial Statements.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Consolidated Financial Statements of the current period. These matters were addressed in the context of our audit of the Consolidated Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
1. Loss on fair value measurement of other payable / deferred consideration payable to IRB Group. Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims. Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head 'Loss on fair value measurement of other payable'.	• We reviewed the Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs. • We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made. • We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein. • We also reviewed the reasonableness of the variables applied in the said computation. • Based on the above, the fair value of liability to the Sponsor, as estimated by the valuer, taking into consideration the weighted average of probabilities of realization has been validated.
2. Impairment Testing The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment.	• We evaluated management's assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management.

PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights. Accordingly, the evaluation of impairment of toll collection rights has been determined as a Key Audit Matter.	• Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue. • Evaluated the potential changes in major components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were suitable. • Assessed the appropriateness of the weighted average cost of capital used in determining recoverable amount. • Performed sensitivity analysis of key assumptions used in valuation. • Tested the arithmetical accuracy of the model.

INFORMATION OTHER THAN THE CONSOLIDATED FINANCIAL STATEMENTS AND AUDITOR'S REPORT THEREON

The Board of Directors of the Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Management Discussion and Analysis, Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations but, does not include the Consolidated Financial Statements and our auditor's report thereon.

Our opinion on the Consolidated Financial Statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Consolidated Financial Statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF THE BOARD OF DIRECTORS OF INVESTMENT MANAGER FOR THE CONSOLIDATED FINANCIAL STATEMENTS

The Board of Directors of Investment Manager ('the Management') is responsible for the preparation of these Consolidated Financial Statements that give a true and fair view of the consolidated financial position as at 31 March 2023, consolidated financial performance including other comprehensive income, consolidated movement of the unit holder's funds and consolidated cash flows for the year ended March 31, 2023, the consolidated net assets at fair value as at 31 March 2023, its consolidated total returns at fair value and the net distributable cash flow of the trust and each of its subsidiaries in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified and/or any addendum thereto as defined in Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended read with the Securities and Exchange Board of India (Infrastructure Investment Trusts)Regulation 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "InvIT Regulations").

The Board of Directors of Investment Manager and the respective Board of Directors of the companies included in the Group are responsible for maintenance of adequate accounting records in accordance with the provisions of the relevant laws for safeguarding of the assets of the Group and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the consolidated financial statements that give a true and fair view and are free from material misstatement, whether due to fraud and error, which have been used for the purpose of preparation of the consolidated financial statements by the management of the trust, as aforesaid.

In preparing the Consolidated Financial Statements, the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group are responsible for assessing the ability of the Group to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of the Investment Manager and the respective Board of Directors of the subsidiary companies included in the Group are also responsible for overseeing the financial reporting process.

AUDITOR'S RESPONSIBILITY FOR THE AUDIT OF THE CONSOLIDATED IND AS FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance whether the Consolidated Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also,

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of such controls.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors of the Investment Manager.
- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group of which we are the independent auditors, to express an opinion on the Consolidated Financial Statements. We are responsible for the direction, supervision and performance of the audit of the Financial Statements of such entities included in the Consolidated Financial Statements of which we are the independent auditors. For companies included in the consolidated financial statement, which have been audited by other auditors, such other auditors remain responsible for the direction, supervision and performance of the audits carried out by them. We remain solely responsible for our audit opinion.

Materiality is the magnitude of misstatements in the Consolidated Financial Statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the Financial Statements.

We communicate with those charged with governance of the trust included in the consolidated financial statements of which we are the independent auditors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Consolidated Financial Statements of the current period and are therefore the Key Audit Matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

OTHER MATTERS

We did not audit the Financial Statements and other financial information of 5 subsidiaries, whose Financial Statements reflect Total Assets of INR 1,13,238.70 Million, Net Assets of INR 35,029.67 Million as at 31 March 2023, Total Revenues of IINR 19,132.81 Million, Losses after taxes of INR 1,657.28 Million and Net Cash Inflow amounting to INR 201.07 Million for the year ended on 31 March 2023, as considered in the Consolidated Financial Statements before giving effect to elimination of intra-group transactions. These Financial Statements and other financial information have been audited by other auditor whose reports have been furnished to us by the Management and our opinion on the Consolidated Financial Statements, in so far as it relates to the amounts and disclosures included in respect of these subsidiaries and our report in terms of InvIT regulations, in so far as it relates to the aforesaid subsidiaries is based solely on the reports of the other auditor.

Our opinion above, on the Consolidated Financial Statements, and our report on other legal and regulatory requirements below, is not modified in respect of the above matters with respect to our reliance on the work done by and the reports of the other auditor.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Based on our audit and as required by SEBI InvIT Regulations, we report that**:**

a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit of the aforesaid Consolidated Financial Statements.

b. The consolidated Balance Sheet, and the consolidated Statement of Profit and Loss including other comprehensive income dealt with by this report are in agreement with the books of account maintained for the purpose of preparation of the consolidated financial statements; and

c. In our opinion, the aforesaid consolidated financial statements comply with the Indian Accounting Standards (Ind AS) and / or any addendum thereto as defined in Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For Gokhale & Sathe,
Chartered Accountants
Firm Registration No.: 103264W

SD/-
CA Kaustubh Deshpande,
Partner
Membership No. 121011
UDIN: 23121011BGXXWC5823
Date: 12th May 2023
Place: Mumbai

IRB Infrastructure Trust
Consolidated Balance sheet as at March 31, 2023

(Rs. in Millions)

	Notes	As at March 31, 2023	As at March 31, 2022
ASSETS			
Non-current assets			
Property, Plant and Equipment	4	7.59	8.85
Goodwill		604.54	604.54
Other Intangible assets	4	2,28,418.29	2,21,859.48
Intangible assets under development	4	2,421.67	1,290.89
Financial assets			
i) Others	7	0.33	2.74
Other non-current assets	9	174.07	656.55
Deferred tax assets (net)	8	755.80	287.67
		2,32,382.29	**2,24,710.72**
Current assets			
Financial assets			
i) Investments	5	1,283.09	659.54
ii) Trade receivables	6	84.67	51.55
iii) Cash and cash equivalents	10	731.31	287.23
iv) Bank balance other than (iii) above	11	4,866.69	2,469.97
v) Others	7	1,448.56	1,604.18
Current tax assets (net)	12	24.81	114.22
Other current assets	13	2,657.07	1,677.46
		11,096.20	**6,864.15**
Total assets		**2,43,478.49**	**2,31,574.87**
EQUITY AND LIABILITIES			
Equity			
Equity share capital	14	87,929.33	85,504.33
Other equity	15		
Other reserves		(10,395.80)	(8,108.29)
Total Equity		**77,533.53**	**77,396.04**
Non-controlling interests		**0.81**	**-**
		77,534.34	**77,396.04**
Non-current liabilities			
Financial liabilities			
i) Borrowings	16	98,943.95	92,559.82
ii) Other financial liabilities	18	35,780.80	35,168.79
iii) Trade payables	19	4,165.72	5,998.85
Provisions	20	2,965.03	1,350.57
		1,41,855.50	**1,35,078.03**
Current liabilities			
Financial liabilities			
i) Borrowings	16	6,135.65	4,719.18
ii) Trade payables	17		
a) total outstanding dues of micro enterprises and small		1.61	3.69
b) total outstanding dues of creditors other than micro enterprises and small enterprises		15,303.87	11,214.65
iii) Other financial liabilities	18	2,549.37	3,023.13
Other current liabilities	21	98.15	140.15
		24,088.65	**19,100.80**
Total liabilities		**1,65,944.15**	**1,54,178.83**
Total equity and liabilities		**2,43,478.49**	**2,31,574.87**

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes) are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

Place: Mumbai
Date: 12.05.2023

IRB Infrastructure Trust
Consolidated Statement of Profit and Loss for the year ended March 31, 2023

(Rs. in Millions)

Particulars	Notes	For the year ended March 31, 2023	For the year ended March 31, 2022
Income			
Revenue from operations	22	26,912.59	12,404.84
Other income	23	263.08	100.13
Total income		**27,175.67**	**12,504.97**
Expenses			
Valuation Expenses		2.67	1.46
Audit fees	27A	5.04	3.13
Operating Expenses	24	12,865.52	2,029.53
Project Management Fees		2,647.70	1,960.27
Insurance and Security Expenses		14.72	1.12
Trustee Fees		5.95	4.16
Depreciation on Property, plant and Equipment	25	1.25	1.74
Amortisation of Intangible Assets	25	2,809.17	1,673.16
Finance costs (Interest)	26	9,005.28	8,670.13
Finance costs (Others)	26	1,249.41	868.58
Investment Manager Fees		56.52	42.48
Custodian fees		0.09	0.18
Loss on sale of assets		0.01	-
Fair value loss on measurement of other payable		560.53	2,161.31
Other expenses	27	256.29	235.06
Total expenses		**29,480.14**	**17,652.31**
Profit/(loss) before tax		**(2,304.47)**	**(5,147.34)**
Tax expenses			
Current tax		435.25	8.87
Deferred tax		(468.13)	(720.23)
MAT Credit utilisation / (Entitlement)		-	-
Total tax expenses		**(32.88)**	**(711.36)**
Profit/(loss) after tax		**(2,271.59)**	**(4,435.98)**
Other comprehensive income			
Item that will not be reclassified to profit or loss:			
(a) Re-measurement (loss)/gain on defined benefit plans (net of taxes)		-	-
Other comprehensive income/ (loss) for the year, net of tax		-	-
Total comprehensive income /(loss) for the year		**(2,271.59)**	**(4,435.98)**
Profit/(loss) after tax		**(2,271.59)**	**(4,435.98)**
Attributable to:			
Owners of the Project SPV Group		(2,272.18)	(4,435.98)
Non-controlling interests		0.59	-
Total comprehensive income for the year			
Attributable to:			
Equity holders of the Project SPV Group		(2,272.18)	(4,435.98)
Non-controlling interests		0.59	-
Earnings per unit (of Rs 100 each)	43		
Basic		(2.59)	(5.26)
Diluted		(2.59)	(5.26)

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes) are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 12.05.2023

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Consolidated statement of net assets at fair value

(Rs. in Millions)

	As at March 31, 2023		As at March 31, 2022	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	2,43,478.49	2,99,372.54	2,31,574.87	2,52,287.18
B. Liabilities (at book value)	1,65,944.15	1,16,629.02	1,54,178.83	1,05,330.89
C. Net Assets (A-B)	77,534.34	1,82,743.52	77,396.04	1,46,956.29
D. Number of units (in millions)	879.29	879.29	855.04	855.04
E. NAV (C/D) (Amount in Rs.)	**88.18**	**207.83**	**90.52**	**171.87**

Project wise break up of fair value of total assets:

Name of the project	As at March 31, 2023
IRB Westcoast Tollway Limited (IRBWTL)	36,482.81
Solapur Yedeshi Tollway Limited (SYTL)	24,790.88
Yedeshi Aurangabad Tollway Limited (YATL)	43,312.69
Kaithal Tollway Limited (KTL)	25,383.75
AE Tollway Limited (AETL)	32,259.22
Udaipur Tollway Limited (UTL)	27,580.66
CG Tollway Limited (CGTL)	29,523.00
Kishangarh Gulabpura Tollway Limited (KGTL)	23,223.41
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	43,631.92
Palsit Dankuni Tollway Private Limited (PDTPL)	12,478.53
Subtotal	**2,98,666.88**
Add : IRB Infrastructure Trust Assets	**705.66**
Total assets	**2,99,372.54**

B. Consolidated statement of total returns at fair value :

(Rs. in Millions)

Particulars	**For the year ended March 31, 2023**	**For the year ended March 31, 2022**
Total Comprehensive Income (As per the Statement of Profit and Loss)	(2,271.59)	(4,435.98)
Add/Less: other changes in fair value (e.g., in investment property, property, plant & equipment (if cost model is followed)) not recognized in total comprehensive income	1,05,209.18	69,560.25
Total Return	**1,02,937.59**	**65,124.27**

Notes :
Fair value of assets as at March 31, 2023 and March 31, 2022 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 12.05.2023

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D.Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

IRB Infrastructure Trust
Consolidated Statement of Cash Flows for the year ended March 31, 2023

(Rs. in Millions)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Cash flow from operating activities		
Profit/(loss) before tax	(2,304.47)	(5,147.34)
Adjustment to reconcile profit before tax to net cash flows:		
Depreciation and amortisation	2,810.42	1,674.90
Resurfacing expenses	1,614.45	992.73
Fair value gain on mutual funds	(11.35)	(0.78)
Net (gain) on sale of current Investment	(62.95)	(13.93)
Finance costs	10,111.65	9,538.70
Interest income	(186.05)	(81.69)
Gain/(loss) on fair value measurement of other payable	560.53	2,161.31
Operating profit before working capital changes	**12,532.23**	**9,123.91**
Movement in working capital:		
Increase/ (decrease) in trade payables	1,178.92	11,498.13
Increase/ (decrease) in provisions	-	-
Increase/ (decrease) in other financial liabilities	435.72	306.46
(Decrease)/ increase in other liabilities	(45.01)	30.37
Decrease / (increase) in trade receivables	(33.12)	48.69
(Increase) / decrease in other financial assets	134.16	(989.59)
(Increase) / decrease in other assets	(343.36)	(167.46)
Cash generated from operations	**13,859.54**	**19,850.51**
Taxes paid (net)	(345.84)	32.09
Net cash flows generated from operating activities (A)	**13,513.70**	**19,882.59**
Cash flows from investing activities		
Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development and capital advances	(11,055.81)	(17,617.12)
Proceeds from sale/ (purchase) of current investments (net)	(549.25)	(72.33)
Investments in bank deposits (having original maturity of more than three months) (net)	(2396.72)	(725.62)
Interest received	200.12	103.63
Net cash flows (used in) investing activities (B)	**(13,801.66)**	**(18,311.44)**
Cash flows from financing activities		
Proceeds from non-current borrowings	32,302.27	3,988.29
Repayment of non-current borrowings	(25923.75)	(775.43)
Proceed of current borrowings	1,532.48	4759.00
Repayment of current borrowings	(447.97)	(4828.83)
Issue of equity share capital	2,425.00	3,816.33
Unit issue expenses	(15.33)	(3.26)
Finance cost paid	(9,140.79)	(8,653.52)
Net cash flows (used in)/generated from financing activities (C)	**731.91**	**(1,697.41)**
Net increase / (decrease) in cash and cash equivalents (A+B+C)	**443.95**	**(126.26)**
Cash and cash equivalents at the beginning of the year	287.23	413.49
Add: Cash acquired during business combination	0.13	
Cash and cash equivalents at the end of the year (refer note 10)	**731.31**	**287.23**
Components of cash and cash equivalents		
Balances with scheduled banks:		
- Trust, retention and other escrow accounts	394.06	161.56
- Others	279.37	118.03
- In deposit accounts with original maturity less than 3 months	49.50	-
Cash on hand	8.38	7.64
Total cash and cash equivalents	**731.31**	**287.23**

IRB Infrastructure Trust
Consolidated Statement of Cash Flows for the year ended March 31, 2023

(Rs. in Millions)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Debt reconciliation statement in accordance with Ind AS 7		
Opening balances		
Long term borrowing	94,124.22	90,833.34
Short term borrowing	4,085.74	4,155.57
Movements		
Cash Flows		
Long term borrowing	7,245.60	3,290.88
Short term borrowing	1264.98	(69.83)
Non-cash changes		
Long term borrowing	-	-
Short term borrowing	-	-
Closing balances		
Long term borrowing	1,01,369.82	94,124.22
Short term borrowing	5,350.72	4,085.74

Notes :
1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.

3. The Consolidated cash flow statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows".

Summary of significant accounting policies 3
The accompanying summary of significant accounting policies and other explanatory information (notes)are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

Place: Mumbai
Date: 12.05.2023

Statement of changes in Unitholders equity

A. Unit capital:

(Rs. in Millions)

	March 31, 2023		March 31, 2022	
i) Units issued, subscribed and fully paid	**No.**	**Rs.**	**No.**	**Rs.**
Units having face value of Rs. 100/-				
Balance at the beginning of the year	85,50,43,265	85,504.33	81,68,80,000	81,688.00
Issue of Unit capital (Note 14)	2,42,50,000	2,425.00	3,81,63,265	3,816.33
Balance at the end of the year	**87,92,93,265**	**87,929.33**	**85,50,43,265**	**85,504.33**

B. Other equity

(Rs. in Millions)

	March 31, 2023	**March 31, 2022**
Retained earnings		
Balance at the beginning of the year	(8,108.29)	(3,669.05)
Profit/(loss) for the year	(2,272.18)	(4,435.98)
Pre-incorporation profit		
Unit Issue expenses	(15.33)	(3.26)
Balance at the end of the year	**(10,395.80)**	**(8,108.29)**

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes)are an integral part of Consolidated Financial Statements.

As per our report of even date attached

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

Place: Mumbai
Date: 12.05.2023

Additional Disclosures as required by Paragraph 6 to SEBI Circulars No. CIR/MD/DF/127/2016

a. Net Distributable Cash Flow for the half year ended March 31, 2023

(i) IRB Infrastructure Trust

(Rs. in Millions)

Sr. No.	Particulars	Year ended March 31, 2023#	Year ended March 31, 2022
1	Cash flows received from Project SPVs in the form of Interest	2,097.00	825.00
2	Cash flows received from Project SPVs in the form of Dividend	-	-
3	Any other income accruing at the Trust level and not captured above, including but not limited to interest/return on surplus cash invested by the Trust	0.92	0.40
4	Cash flows received from the project SPVs towards the repayment (Net) of the debt issued to the Project SPVs by the Trust	(1,928.34)	(1,682.67)
5	**Total cash inflow at the Trust level (A)**	**169.58**	**(857.27)**
	Less:		
6	Any payment of fees, interest and expense incurred at the Trust level, including but not limited to the fees of the Investment Manager	(113.33)	(63.38)
7	Income tax (if applicable) at the Standalone Trust Level	-	-
8	Repayment of external debt	-	-
9	**Total cash outflows / retention at the Trust level (B)**	**(113.33)**	**(63.38)**
10	**Net Distributable Cash Flows (C) = (A+B)**	**56.25**	**(920.65)**

The same is earmarked towards capex for ongoing projects.

Note :

1 Excludes interest due but not received of Rs.922.36, Rs.1,202.41 millions,Rs. 1,729.24 millions,Rs. 2,124.77 millions and Rs. 3,375 Millions for the six months ended March 31, 2023, six months ended September 30, 2022, six months ended March 31, 2022, year ended March 31, 2023 and year ended March 31, 2022.

2 Netted - off with disbursement of short-term unsecured loan to project SPVs. (Refer RPT disclosures of standalone financial results).

(ii) IRB Westcoast Tollway Limited (IRBWC)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(1,135.93)	(815.33)
2	Add: Depreciation and amortisation as per Statement of profit and loss	164.74	113.19
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	137.31	64.76
4	Add: Interest paid/payable to the Trust	530.18	491.37
5	Add :- Provision for resurfacing expenses (Net)		
6	Less: Principal repayment of external debt	(70.97)	(86.97)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total adjustments (B)	**761.26**	**582.35**
11	**Net Distributable Cash Flows (C) = (A+B)**	**(374.67)**	**(232.98)**

(ii) Yedeshi Aurangabad Tollway Limited (YATL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(264.71)	(834.88)
2	Add: Depreciation and amortisation as per Statement of profit and loss	559.99	305.02
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	41.68	3.08
4	Add: Interest paid/payable to the Trust	581.77	560.00
5	Add :- Provision for resurfacing expenses (Net)	109.06	102.67
6	Less: Principal repayment of external debt	(60.29)	(361.08)
7	Less: Tax paid		
8	Less: Creation of MMRA	(220.00)	
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**1,012.21**	**609.69**
11	**Net Distributable Cash Flows (C) = (A+B)**	**747.50**	**(225.19)**

(iii) Solpaur Yedeshi Tollway Limited (SYTL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(225.45)	(543.70)
2	Add: Depreciation and amortisation as per Statement of profit and loss	168.97	116.74
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	20.80	7.61
4	Add: Interest paid/payable to the Trust	560.00	560.00
5	Add :- Provision for resurfacing expenses (Net)	60.75	59.68
6	Less: Principal repayment of external debt	(5.86)	(111.88)
7	Less: Tax paid		
8	Less: Creation of MMRA	(80.00)	
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**724.66**	**632.15**
11	**Net Distributable Cash Flows (C) = (A+B)**	**499.21**	**88.45**

(iii) Kaithal Tollway Limited (KTL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022*
1	Profit after tax as per profit and loss account (A)	(848.69)	(896.42)
2	Add: Depreciation and amortisation as per Statement of profit and loss	212.13	52.97
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	96.97	77.30
4	Add: Interest paid/payable to the Trust	1,186.02	1,186.02
5	Add :- Provision for resurfacing expenses (Net)	176.65	171.38
6	Less: Principal repayment of external debt	(121.25)	(66.45)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**1,550.52**	**1,421.22**
11	**Net Distributable Cash Flows (C) = (A+B)**	**701.83**	**524.80**

* Profit after tax is inclusive of compensation income towards toll suspension due to farmers agitation amounting to Rs.900.90 millions.

(v) Agra Etawah Tollway Limited (AETL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022*
1	Profit after tax as per profit and loss account (A)	(1,749.13)	(1,669.85)
2	Add: Depreciation and amortisation as per Statement of profit and loss	309.71	262.06
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	32.54	12.68
4	Add: Interest paid/payable to the Trust	1,333.98	1,333.98
5	Add :- Provision for resurfacing expenses (Net)	185.82	178.57
6	Less: Principal repayment of external debt	(68.51)	(37.63)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**1,793.54**	**1,749.66**
11	**Net Distributable Cash Flows (C) = (A+B)**	**44.41**	**79.81**

* Profit after tax is inclusive of compensation income towards toll suspension due to farmers agitation amounting to Rs.64.26 millions.

(vi) Udaipur Tollway Limited (UTL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(1,903.87)	(1,291.68)
2	Add: Depreciation and amortisation as per Statement of profit and loss	364.50	267.28
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	120.39	164.27
4	Add: Interest paid/payable to the Trust	-	-
5	Add :- Provision for resurfacing expenses (Net)	432.11	349.85
6	Less: Principal repayment of external debt	(28.84)	(32.90)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**888.16**	**748.50**
11	**Net Distributable Cash Flows (C) = (A+B)**	**(1,015.71)**	**(543.18)**

(vii) Chittorgarh Gulabpura Tollway Limited (CGTL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(936.67)	(213.49)
2	Add: Depreciation and amortisation as per Statement of profit and loss	371.14	243.63
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	(110.79)	145.29
4	Add: Interest paid/payable to the Trust	-	-
5	Add :- Provision for Resurfacing Expenses (Net)	126.16	76.99
6	Less: Repayment of external debt (principal)	(79.44)	(51.48)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**307.08**	**414.43**
11	**Net Distributable Cash Flows (C) = (A+B)**	**(629.59)**	**200.94**

(viii) Kishangarh Gulabpura Tollway Limited (KGTL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023#	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(247.35)	(405.09)
2	Add: Depreciation and amortisation as per Statement of profit and loss	212.76	103.80
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	249.35	174.35
4	Add: Interest paid/payable to the Trust	-	-
5	Add :- Provision for Resurfacing Expenses (Net)	110.67	
6	Less: Repayment of external debt (principal)	(36.32)	(15.94)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**536.46**	**262.21**
11	**Net Distributable Cash Flows (C) = (A+B)**	**289.11**	**(142.88)**

The said funds are earmarked towards NHAI premium payment.

(ix) IRB Hapur Muradabad Tollway Limited (IRBHM)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023#	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(75.48)	(285.44)
2	Add: Depreciation and amortisation as per Statement of profit and loss	351.78	210.21
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	120.02	87.52
4	Add: Interest paid/payable to the Trust	-	-
5	Add :- Provision for Resurfacing Expenses (Net)	270.19	
6	Less: Repayment of external debt (principal)	(134.90)	(11.10)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project	(62.03)	(10.20)
10	Total Adjustments (B)	**545.06**	**276.43**
11	**Net Distributable Cash Flows (C) = (A+B)#**	**469.58**	**(9.01)**

The said funds are earmarked towards balance Capex.

(x) Palsit Dankuni Tollway Private Limited (PDTPL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023#
1	Profit after tax as per profit and loss account (A)	1,430.69
2	Add: Depreciation and amortisation as per Statement of profit and loss	94.71
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	193.17
4	Add: Interest paid/payable to the Trust	
5	Add :- Provision for Resurfacing Expenses (Net)	
6	Less: Repayment of external debt (principal)	
7	Less: Tax paid	(363.10)
8	Less: Creation of MMRA	
9	Less: Capital expenditure towards the project	(1,332.99)
10	Total Adjustments (B)	**(1,408.21)**
11	**Net Distributable Cash Flows (C) = (A+B)**	**22.48**

The said funds are earmarked towards balance Capex.

1 **Corporate Information**

The IRB Infrastructure Trust (the "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under the Registration Act, 1908 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited (“IRB” or the “Sponsor”), an infrastructure development company in India. The Trustee to the Fund is IDBI Trusteeship Services Limited (the “Trustee”). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager”). The Trust has received registraion certificate from SEBI on November 25, 2019.

The Trust has been formed to invest in infrastructure assets primarily being in the road sector in India. The Trust’s road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles (“Project SPVs” together as "Project SPV Group"). The Trust’s portfolio comprises of ten road projects as listed below:-

Project SPV Name**	Residual Concession life*	Proposed shareholding	Nature of Investment	Status	Principal Activities	Country of incorporation
IRB Westcoast Tollway Limited (IRBWTL)	18 years 11 Months 2 days	100%	Subsidiary	Tolling and Construction	Construction and operation of road including toll collection.	India
Solapur Yedeshi Tollway Limited (SYTL)	20 years 9 Months 21 days	100%	Subsidiary	Operating		India
Yedeshi Aurangabad Tollway Limited (YATL)	18 years 3 Months 1 days	100%	Subsidiary	Operating		India
Kaithal Tollway Limited (KTL)	19 years 3 Months 15 days	100%	Subsidiary	Operating		India
AE Tollway Limited (AETL)	17 years 4 Months 2 days	100%	Subsidiary	Operating		India
Udaipur Tollway Limited (UTL)	15 years 5 Months 4 days	100%	Subsidiary	Operating		India
CG Tollway Limited (CGTL)	14 years 7 Months 5 days	100%	Subsidiary	Operating		India
Kishangarh Gulabpura Tollway Limited (KGTL)	14 years 10 Months 22 days	100%	Subsidiary	Operating		India
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	18 years 1 Months 25 days	100%	Subsidiary	Operating		India
Palsit Dankuni Tollway Private Limited (PDTPL) w.e.f 02.04.2022	16 years 0 Months 1 days	100%	Subsidiary	Tolling and Construction		India

* Represents residual concession life as at March 31, 2023 as per original concession period (without considering extension of concession period, if any).

** Of the above Project SPVs, IRBWTL, SYTL, YATL, AETL, CGTL, UTL and IRBHMTL have been converted to public companies on November 13, 2019 and KTLand KGTL on November 14, 2019 .

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.
The financial statements were authorised for issue in accordance with resolution passed by the board of directors of the Investment manager on May 12, 2023.
The Trust has been listed on NSE w.e.f. 03.04.2023.

2 **Basis of preparation**

A. **Statement of compliance**

The Consolidated Financial Statements of Project SPV Group comprises of Consolidated Balance Sheet as at March 31, 2023 and March 31, 2022, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income) of the Project SPV group, the Consolidated Statement of Cash Flow Statement, the Consolidated Statement of Changes in Equity of the movement of the unit holders for the year ended March 31, 2023 and March 31, 2022, the consolidated statement of Net Assets at Fair Value as at March 31, 2023 and March 31, 2022 and the Consolidated Statement of Total Returns at Fair Value for the year ended March 31, 2023 and March 31, 2022, a summary of significant accounting policies, notes and other explanatory Information.

The Consolidated Financial Statements of the Project SPV Group have been prepared in accordance with Indian Accounting Standards (Ind AS) as per the Companies (Indian Accounting Standards) Rules, 2015 notified under Section 133 of the Act, read with SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended and the circulars issued thereunder ("InvIT Regulations") and other accounting principles generally accepted in India.The Consolidated Financial Statements have been prepared on a accrued and historical cost basis, except for certain assets and liabilities which have been measured at fair value.

The Consolidated Financial Statements are presented in Rs. in millions, except when otherwise indicated.Wherever the amount represented '0' (zero) construes value less than Rupees five thousand.

B **Basis of preparation of Consolidated Financial Statements**

The Consolidated Financial Statements comprise the Financial Statements of the Project SPV Group.

Consolidated Financial Statements are prepared using uniform accounting policies for like transactions and other events in similar circumstances.

The Financial Statements of all Project SPVs used for the purpose of consolidation are drawn up to the same reporting date i.e. year ended on March 31.
Consolidation procedure:

(a) Consolidate like items of assets, liabilities, equity, income, expenses and cash flows of Project SPVs.

(b) Eliminate in full intra Project SPVs assets and liabilities, income, expenses and cash flows relating to transactions between Project SPVs of the Project SPV Group (profits or losses resulting from intra Project SPV Group transactions that are recognised in assets, such as inventory and property, plant and equipment, are eliminated in full). Profit or loss and each component of other comprehensive income (OCI) are attributed to the equity holders of the Project SPV Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance.

3 **Summary of significant accounting policies**

3.01 **Current versus non-current classification**

The Project SPV Group has identified twelve months as its operating cycle. The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents.

The Project SPV Group presents assets and liabilities in the balance sheet based on current/ non-current classification. An asset is treated as current when it is:

- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Project SPV Group classifies all other liabilities as non-current.
Deferred tax assets and liabilities are classified as non-current assets and liabilities respectively.

3.02 **Use of estimates and judgements**

The preparation of the Project SPV Group's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future years.

Estimates and assumptions

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the year in which the estimates are revised and future periods are affected.

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below. The Project SPV Group based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

Fair value measurement of financial instruments (refer note 31)
Provision for major maintenance (refer note 20)
Impairment of non financial assets (refer note 3.19)

3.03 **Business Combinations**

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred measured at fair value on acquisition date and the amount of any non-controlling interests in the acquiree. For each business combination, the Group elects whether to measure the non-controlling interests in the acquiree at fair value or at the proportionate share of the acquiree's identifiable net assets.

At the acquisition date, the identifiable assets acquired and the liabilities assumed are recognised at their acquisition date fair values. For this purpose, the liabilities assumed include contingent liabilities representing present obligation and they are measured at their acquisition fair values irrespective of the fact that outflow of resources embodying economic benefits is not probable.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognised for non-controlling interests, and any previous interest held, over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognised at the acquisition date. If the reassessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognised in OCI and accumulated in equity as capital reserve. However, if there is no clear evidence of bargain purchase, the entity recognises the gain directly in equity as capital reserve, without routing the same through OCI.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

A cash generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro rata based on the carrying amount of each asset in the unit.

Any impairment loss for goodwill is recognised in profit or loss. An impairment loss recognised for goodwill is not reversed in subsequent periods. Where goodwill has been allocated to a cashgenerating unit and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain or loss on disposal. Goodwill disposed in these circumstances is measured based on the relative values of the disposed operation and the portion of the cash-generating unit retained.

3.04 **Asset acquisition**

The acquisition of an asset or a group of assets that does not constitute a business. In such cases the acquirer shall identify and recognise the individual identifiable asset acquired including those assets that meet the definition of, and recognition criteria for, intangible asset in IND AS 38, Intangible Assets and Liabilities assumed. The cost of the group is allocated to the individual identifiable assets and liabilities on the basis of their relative fail values at the date of purchase. Such a transaction or event does not give rise to goodwill.

3.05 **Fair value measurement**

The Project SPV Group measures financial instruments, (refer note 31) at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the Project SPV Group.
The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Project SPV Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1 - Quoted (unadjusted) market prices in active markets for identical assets or liabilities

Level 2- Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable

Level 3 -Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Project SPV Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Project SPV Group's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Project SPV Group's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management presents the valuation results to the Investment Manager and the Project SPV Group's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Project SPV Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.

Disclosures for valuation methods, significant estimates and assumptions (note 3.02)

Financial instruments (including those carried at amortised cost) (note 5,6,7,11,17,18,19,31)

Quantative disclosure of fair value measurement hierarchy (note 32)

3.06 **Revenue recognition**

The Project SPV Group has applied the following accounting policy for revenue recognition:

Revenue from contracts with customers:

The Project SPV Group recognises revenue from contracts with customers based on a five step model as set out in Ind AS 115:

Step 1. Identify the contract(s) with a customer: A contract is defined as an agreement between two or more parties that creates enforceable rights and obligations and sets out the criteria for every contract that must be met.

Step 2. Identify the performance obligations in the contract: A performance obligation is a promise in a contract with a customer to transfer a good or service to the customer.

Step 3. Determine the transaction price: The transaction price is the amount of consideration to which the Company expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties.

Step 4. Allocate the transaction price to the performance obligations in the contract: For a contract that has more than one performance obligation, the Company will allocate the transaction price to each performance obligation in an amount that depicts the amount of consideration to which the Company expects to be entitled in exchange for satisfying each performance obligation.

Step 5. Recognise revenue when (or as) the entity satisfies a performance obligation.

The Project SPV Group satisfies a performance obligation and recognises revenue over time, if one of the following criteria is met:

1. The customer simultaneously receives and consumes the benefits provided by the Project SPV Group's performance as the Project SPV Group performs; or
2. The Project SPV Group's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or
3. The Project SPV Group's performance does not create an asset with an alternative use to the Project SPV Group and the entity has an enforceable right to payment for performance completed to date.

Contract revenue

Contract revenue associated with the utility shifting incidental to construction of road are recognized as revenue by reference to the stage of completion of the projects at the balance sheet date. The stage of completion of project is determined by the proportion that contract cost incurred for work performed up to the balance sheet date bears to the estimated total contract costs. Project SPVs operations involve levying of GST on the construction work. Goods and Service tax is not received by the project SPVs on its own account, rather, it is tax collected on value added to the commodity by the seller on behalf of the government. Accordingly, it is excluded from revenue.

Income from the concession arrangements earned under the intangible asset model consists of the (i) fair value of contract revenue, which is deemed to be fair value of consideration transferred to acquire the asset; and (ii) payments actually received from the users. The intangible asset is amortised over its expected useful life in a way that reflects the pattern in which the asset's economic benefits are consumed by the Project SPV Group, starting from the date when the right to operate starts to be used. Based on these principles, the intangible asset is amortised in line with the actual usage of the specific public utility facility, with a maximum of the duration of the concession.

Income from toll contracts

The income from Toll Contracts on BOT basis are recognised on actual collection of toll revenue (net of Premium and revenue share payable to NHAI) as per Concession Agreement. Revenue from electronic toll collection is recognised on accrual basis.

Interest income

For all financial assets measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortised cost of a financial liability. When calculating the effective interest rate, the Project SPV Group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in finance income in the statement of profit and loss.

Dividends

Revenue is recognised when the Project SPV Group's right to receive the payment is established, which is generally when shareholders approve the dividend.

Trade receivables

A receivable represents the Project SPV Group's right to an amount of consideration that is unconditional i.e. only the passage of time is required before payment of consideration is due.

3.07 **Government Grants**

Grants and subsidies from the government are recognised if the following conditions are satisfied.

There is reasonable assurance that the Project SPV Group will comply with the conditions attached to it.

Such benefits are earned and reasonable certainty exists of the collection.

Government grants are recognised in accordance with the terms of the respective grant on accrual basis considering the status of compliance of prescribed conditions and ascertainment that the grant will be received.

Grant received are considered as a part of the total outlay of the construction project and accordingly, the same is reduced from the gross value of assets.

3.08 **Taxes**

Current income tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities in accordance the Income Tax Act, 1961. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the country where the Company operates and generates taxable income.

Current income tax relating to items recognised outside profit or loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.
- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction. affects neither the accounting profit nor taxable profit or loss.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity). Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity .

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, are recognised subsequently if new information about facts and circumstances change. Acquired deferred tax benefits recognised within the measurement period reduce goodwill related to that acquisition if they result from new information obtained about facts and circumstances existing at the acquisition date. If the carrying amount of goodwill is zero, any remaining deferred tax benefits are recognised in OCI/ capital reserve depending on the principle explained for bargain purchase gains. All other acquired tax benefits realised are recognised in the consolidated statement of profit and loss. Deferred tax is recognised in consolidated statement of profit and loss on the consolidated adjustments.

Minimum Alternate Tax (MAT)

Minimum Alternate Tax (MAT) paid as per Indian Income Tax Act, 1961 is in the nature of unused tax credit which can be carried forward and utilised when the Project SPV Group will pay normal income tax during the specified period. Being DTA tax credit is recognised to the extent that it is probable that the unused tax credit can be utilised in the specified future period. The net amount of tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the balance sheet.

Goods and service tax paid on acquisition of assets or on incurring expenses

Expenses and assets are recognised net of the amount of goods and service tax paid, except:

When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet.

3.09 **Property, plant and equipment**

Property, plant and equipment are stated at cost, less accumulated depreciation and impairment losses if any. Cost comprises the purchase price and any attributable cost of bringing the asset to its working condition for its intended use.Any trade discount or rebates are deducted in arriving at the purchase price.

Depreciation is calculated on written down value method (WDV) using the useful lives as prescribed under the Schedule II to the Companies Act, 2013 or re-assessed by the Project SPV Group based on technical evaluation. The Project SPV Group has estimated the following useful lives for its tangible fixed assets:

Asset class	Useful life
Building	30 years*
Office equipment	5 years
Computers	3 years
Furniture & fixtures	10 years

* The useful life of building has been calculated by management as per their technical estimate.

3.10 **Intangible assets**

The Project SPV Group exercised first time adoption under Ind AS 101 and has elected to continue with the carrying value of its “Toll Collection Rights” (Intangible Assets) including corresponding obligation, as recognised in the financial statements as at the date of transition April 1, 2016 measured as per the Previous GAAP and uses that as its deemed cost as at date of transition.

Toll collection rights are stated at cost, less accumulated amortisation , impairment losses and grant from government. Cost includes:

a) For acquired Toll Collection Rights - Upfront payments towards acquisition and incidental expenses related thereto.

b) Toll Collection Rights awarded by the grantor against construction service rendered by the Project SPV Group on BOT / DBFOT basis - Direct and indirect expenses on construction of roads, bridges, culverts, infrastructure and other assets at the toll plazas.

c) Toll Collection Rights in lieu of premium - Undiscounted premium obligation over the concession period.

Amortisation

Toll Collection Rights are amortised over the period of concession, using revenue based amortisation as prescribed in Ind As-36. Under this method, the carrying value of the rights is amortised in the proportion of actual toll revenue for the year to projected revenue for the balance toll period, to reflect the pattern in which the assets economic benefits will be consumed. At each balance sheet date, the projected revenue for the balance toll period is reviewed by the management. If there is any change in the projected revenue from previous estimates, the amortisation of toll collection rights is changed prospectively to reflect any changes in the estimates.

Intangible assets under development

Expenditure related to and incurred during implementation of project are included under “Intangible Assets under Development”. The same will be transferred to the respective intangible assets on completion of project.

3.11 **Borrowing costs**

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences between the foreign currency borrowing and the functional currency borrowing to the extent regarded as an adjustment to the borrowing costs.

3.12 **Leases**

The determination of whether an arrangement is (or contains) a lease is based on the substance of the arrangement at the inception of the lease. The arrangement is, or contains, a lease if fulfilment of the arrangement is dependent on the use of a specific asset or assets and the arrangement conveys a right to use the asset or assets, even if that right is not explicitly specified in an arrangement.

Project SPV Group as a lessee

A leased asset is depreciated over the useful life of the asset. However, if there is no reasonable certainty that the Project SPV Group will obtain ownership by the end of the lease term, the asset is depreciated over the shorter of the estimated useful life of the asset and the lease term.

A lease is classified at the inception date as a finance lease or an operating lease. A lease that transfers substantially all the risks and rewards incidental to ownership to the Project SPV Group is classified as a finance lease.

Operating lease payments are recognised as an expense in the consolidated statement of profit and loss on a straight-line basis over the lease term.

Ind AS 116 - Leases

Ind AS 116, Leases, it sets out principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases, except short-term leases and leases for low-value items, under a single on-balance sheet lease accounting model. A lessee recognises a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. Lessor accounting largely unchanged from the existing standard – i.e. lessors continue to classify leases as finance or operating leases.

Based on the preliminary assessment, the Company does not expect any significant impacts on transition to Ind AS 116. This assessment is based on currently available information and may be subject to changes arising from further reasonable and supportable information when the standard will be adopted.

Project SPV Group as a lessor

Leases in which the Project SPV Group does not transfer substantially all the risks and rewards of ownership of an asset are classified as operating leases. Rental income from operating lease is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income.Contingent rents are recognised as revenue in the period in which they are earned.

Leases are classified as finance leases when substantially all of the risks and rewards of ownership transfer from the Project SPV Group to the lessee. Amounts due from lessees under finance leases are recorded as receivables at the Project SPV Group’s net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the net investment outstanding in respect of the lease.

3.13 **Provisions**

Provisions are recognised when the Project SPV Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Project SPV Group expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of profit and loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimates.

3.14 **Resurfacing expenses**

As per the Concession Agreements, the Project SPV Group is obligated to carry out resurfacing of the roads under concession. Provision required for resurfacing expenses are measured at the present value of the expenditure required to settle the present obligation at the end of reporting period. The discount rate used to determine the present value is a pre-tax rate that reflects risks specific to the liability. The increase in the provision due to the passage of time is recognised as finance cost. Provision for the planned expenditure is made for the period upto end of the period for which periodic maintenance is required, out of the total entitiled period.The same is stated in the consolidated statement of profit and loss in accordance with Ind AS 37 "Provisions, Contingent Liabilities and Contingent Assets."

3.15 **Contingent liability and Contingent assets**

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Project SPV Group or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Project SPV Group does not recognise a contingent liability but discloses its existence in the financial statements.

A contingent assets is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.

Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.16 **Financial instruments**

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement

All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through statement of profit and loss, transaction costs that are attributable to the acquisition of the financial asset.

On initial recognition, a financial asset is classified as measured of
- amortised cost
- FVOCI - Debt instruments
- FVOCI - equity instruments
- FVTPL

Financial assets are not reclassified subsequent to their initial recognition, except if and in the year, the Project SPV Group changes its business model for managing financial assets.

Debt instruments at amortised cost

A 'debt instrument' is measured at the amortised cost if both the following conditions are met:
- The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
- Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance income in the statement of profit and loss. The losses arising from impairment are recognised in the statement of profit and loss.

Debt instrument at FVTOCI

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:
- The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and
- The asset's contractual cash flows represent SPPI.

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the other comprehensive income (OCI). However, the Project SPV Group recognizes interest income, impairment losses and reversals and foreign exchange gain or loss in the statement of profit and loss. On derecognition of the asset, cumulative gain or loss previously recognised in OCI is reclassified from the equity to Statement of profit and loss.Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as at FVTOCI, is classified as at FVTPL.

In addition, the Project SPV Group may elect to designate a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). The Project SPV Group has designated certain debt instrument as at FVTPL.

Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Equity investments

All equity investments in scope of Ind AS 109 are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Project SPV Group may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value. The Project SPV Group makes such election on an instrument-byinstrument basis. The classification is made on initial recognition and is irrevocable.

If the Project SPV Group decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to P&L, even on sale of investment. However, the Project SPV Group may transfer the cumulative gain or loss within equity.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a Project SPV Group of similar financial assets) is primarily derecognised (i.e. removed from the Project SPV Group's consolidated balance sheet) when:

- The rights to receive cash flows from the asset has expired, or
- The Project SPV Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Project SPV Group has transferred substantially all the risks and rewards of the asset, or (b) the Project SPV Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Project SPV Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Project SPV Group continues to recognise the transferred asset to the extent of the Project SPV Group's continuing involvement. In that case, the Project SPV Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Project SPV Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Project SPV Group could be required to repay.

Impairment of financial assets
In accordance with Ind AS 109, the Project SPV Group applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

-Financial assets that are debt instruments, and are measured at amortised cost e.g., loans, debt securities, deposits, trade receivables and bank balance
-Financial assets that are debt instruments and are measured as at FVTOCI
-Lease receivables under Ind AS 17
-Trade receivables or any contractual right to receive cash or another financial asset that result from transactions that are within the scope of Ind AS 18 (referred to as contractual revenue receivables' in these financial statements)

-Loan commitments which are not measured as at FVTPL
-Financial guarantee contracts which are not measured as at FVTPL
The Project SPV Group follows 'simplified approach' for recognition of impairment loss allowance on:
-Trade receivables; and
-Other receivables
The application of simplified approach does not require the Project SPV Group to track changes in credit risk. Rather, it recognises impairment loss allowance based on lifetime ECLs at each reporting date, right from its initial recognition.

For recognition of impairment loss on other financial assets and risk exposure, the Project SPV Group determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the entity reverts to recognising impairment loss allowance based on 12-month ECL.

Lifetime ECL are the expected credit losses resulting from all possible default events over the expected life of a financial instrument. The 12-month ECL is a portion of the lifetime ECL which results from default events that are possible within 12 months after the reporting date.

ECL is the difference between all contractual cash flows that are due to the Project SPV Group in accordance with the contract and all the cash flows that the entity expects to receive (i.e., all cash shortfalls), discounted at the original EIR. When estimating the cash flows, an entity is required to consider:

-All contractual terms of the financial instrument (including prepayment, extension, call and similar options) over the expected life of the financial instrument. However, in rare cases when the expected life of the financial instrument cannot be estimated reliably, then the entity is required to use the remaining contractual term of the financial instrument. -

-Cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms
-Financial assets measured as at amortised cost, contractual revenue receivables and lease receivables: ECL is presented as an allowance, i.e., as an integral part of the measurement of those assets in the balance sheet. The allowance reduces the net carrying amount. Until the asset meets write-off criteria, the Project SPV Group does not reduce impairment allowance from the gross carrying amount.

Financial liabilities
Initial recognition and measurement
Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through Statement of profit and loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.
The Project SPV Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts and derivative financial instruments.

Subsequent measurement
The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through Statement of profit and loss
Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through statement of profit and loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Project SPV Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the consolidated statement of profit and loss.

Loans and borrowings
This is the category most relevant to the Project SPV Group. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in statement of profit and loss when the liabilities are derecognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

This category generally applies to borrowings. For more information refer note 16.

Derecognition
A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the consolidated statement of profit and loss.

Offsetting of financial instruments
Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.17 **Cash and cash equivalents**
Cash and cash equivalent in the balance sheet comprises of cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, as they are considered an integral part of the Project SPV Group's cash management.

3.18 **Cash dividend to equity holders of the Project SPV Group**
The Project SPV Group recognises a liability to make cash or non-cash distributions to equity holders of the parent when the distribution is authorised and the distribution is no longer at the discretion of the Project SPV Group. As per the corporate laws in India, a distribution is authorised when it is approved by the shareholders. A corresponding amount is recognised directly in equity.

3.19 **Impairment of non-financial assets**
The Project SPV Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Project SPV Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset. unless the asset does not generate cash inflows that are largely independent of those from other assets or Project SPV Group's of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

The Project SPV Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Project SPV Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to project future cash flows after the fifth year. To estimate cash flow projections beyond periods covered by the most recent budgets/forecasts, the Project SPV Group extrapolates cash flow projections in the budget using a steady or declining growth rate for subsequent years, unless an increasing rate can be justified. In any case, this growth rate does not exceed the long-term average growth rate for the products, industries, or country or countries in which the entity operates, or for the market in which the asset is used.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognised impairment losses no longer exist or have decreased. If such indication exists, the Project SPV Group estimates the asset's or CGU's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the statement of profit and loss.

Goodwill is tested for impairment annually as at 31 March and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or Project SPV Group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying amount, an impairment loss is recognised. Impairment losses relating to goodwill cannot be reversed in future periods.

Intangible assets with indefinite useful lives are tested for impairment annually as at 31 March at the CGU level, as appropriate, and when circumstances indicate that the carrying value may be impaired.

3.20 **Segment information**

Based on "Management Approach" as defined in Ind AS 108 - Operating Segments, the Management ("the Board of Directors") evaluates the Project SPV Group's performance and allocates the resources based on an analysis of various performance indicators by business segments. Inter segment sales and transfers are reflected at market prices.

Unallocable items includes general corporate income and expense items which are not allocated to any business segment.

Segment policies:

Based on "Management Approach" as defined in Ind AS 108 -Operating Segments, the Management evaluates the Project SPV Group's performance and allocates the resources based on an analysis of various performance indicators by business segments. Inter segment sales and transfers are reflected at market prices.

Unallocable items includes general corporate income and expense items which are not allocated to any business segment.

The Project SPV Group prepares its segment information in conformity with the accounting policies adopted for preparing and presenting the financial statements of the Project SPV Group as a whole. Common allocable costs are allocated to each segment on an appropriate basis.

3.21 **Earnings per unit**

Basic earnings per unit are calculated by dividing the net profit or loss for the period attributable to unitholders by the weighted average number of units outstanding during the period. For the purpose of calculating diluted earnings per unit, the net profit or loss for the period attributable to unitholders and the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

3.22 **Foreign currencies**

The Trust's financial statements are presented in INR, which is also the Trust's functional currency. The Trust does not have any foreign operation and has assessed the functional currency to be INR.

Transactions and balances

Transactions in foreign currencies are initially recorded by the Trust at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.
Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.
Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

3.23 **Recent pronouncements**

Ministry of Corporate Affairs ("MCA") notifies new standards or amendments to the existing standards under Companies (Indian Accounting Standards) Rules as issued from time to time. On March 31, 2023, MCA amended the Companies (Indian Accounting Standards) Amendment Rules, 2023, as below:

Ind AS 1: Disclosure of Material Accounting policy information and similar consequential amendment to Ind AS 34.
Ind AS 1: Disclosure of the judgements, apart from those involving estimations, that management has made in the process of applying the entity's accounting policies and that have the most significant effect on the amounts recognised in the financial statements.
Ind AS 8: Definition of Accounting Estimate as "Accounting estimates are monetary amounts in financial statements that are subject to measurement uncertainty". Further amendments to paragraphs delineating Changes to Accounting Estimates.
Ind AS 12: Amendments to taxable temporary difference, initial recognition of asset or liability and Deductible taxable differences.
Ind AS 12: Deferred tax related to assets and liabilities arising from Single Transaction.
Ind AS 107: Information about measurement basis (or bases) for financial instruments to be disclosed as material accounting policy.
Ind AS 109: Amendment to paragraph on reassessment of embedded derivative.
Ind AS 115: Amendments to Appendix 1 which gives there in the major differences, if any, between Indian Accounting Standard (Ind AS) 115 and the corresponding International Financial Reporting Standard (IFRS) 15, Revenue from Contracts with Customers, IFRIC 12, Service Concession Arrangements and SIC 29 Service Concession Arrangements: Disclosures, issued by the International Accounting Standards Board

Based on the preliminary assessment, the company does not expect these amendment to have any significant impact on its consolidated financial statements.

Note 4 : Property, Plant and Equipment

(Rs. in Millions)

	Premises	Computer	Office Equipments	Furniture and Fixture	Total
At 31 March 2021	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Additions	-	-	-	-	-
Disposals/ Adjustments	-	-	-	-	-
At 31 March 2022	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Additions	-	-	-	-	-
Disposals/ Adjustments	-	-	0.09	-	0.09
At 31 March 2023	**16.09**	**0.30**	**1.31**	**0.39**	**18.10**
Depreciation					
At 31 March 2021	**5.79**	**0.28**	**1.18**	**0.34**	**7.59**
Additions	1.61	0.00	0.09	0.04	1.74
Disposals/ Adjustments	-	-	-	-	-
At 31 March 2022	**7.40**	**0.29**	**1.28**	**0.38**	**9.34**
Additions	1.20	0.00	0.03	0.01	1.25
Disposals/ Adjustments	-	-	0.08	-	0.08
At 31 March 2023	**8.60**	**0.29**	**1.23**	**0.39**	**10.51**
Net Book value					
At 31 March 2023	**7.49**	**0.01**	**0.08**	**0.00**	**7.59**
At 31 March 2022	**8.69**	**0.02**	**0.12**	**0.02**	**8.85**

Net Book value	**March 31, 2023**	**March 31, 2022**
Property, Plant and Equipment	7.59	8.85

Note 4 : Intangible Assets and Intangible Assets under development

Intangible Assets (Rs. in Millions)

Particulars	**Toll Collection Rights**	**Total**
At 31 March 2021	**2,16,344.42**	**2,16,344.42**
Additions	11,814.99	11,814.99
Deletions	-	-
Adjustments	-	-
At 31 March 2022	**2,28,159.42**	**2,28,159.42**
Additions	9,663.30	9,663.30
Deletions	295.32	295.32
Adjustments	-	-
At 31 March 2023	**2,37,527.40**	**2,37,527.40**
Amortisation		
At 31 March 2021	**4,626.78**	**4,626.78**
Additions	1,673.16	1,673.16
Deletions	-	-
Adjustments	-	-
At 31 March 2022	**6,299.93**	**6,299.93**
Additions	2,809.17	2,809.17
Deletions	-	-
Adjustments	-	-
At 31 March 2023	**9,109.10**	**9,109.10**
Net Book value		
At 31 March 2023	2,28,418.29	
At 31 March 2022	2,21,859.48	

Particulars	**March 31, 2023**	**March 31, 2022**
Toll Collection Rights	2,28,418.29	2,21,859.48
Total	**2,28,418.29**	**2,21,859.48**

Intangible assets under development

(Rs. in Millions)

Particulars	**March 31, 2023**	**March 31, 2022**
Toll Collection Rights		
At the beginning of the year	1,290.89	4,684.26
Add : development during the year	11,128.99	835.34
	12,419.88	5,519.60
Less : Transfer to Intangible Asset (Toll Collection Rights)	9,998.21	4,228.70
Closing balance	**2,421.67**	**1,290.89**
Total	**2,421.67**	**1,290.89**

Tangible and Intangible assets given as security

Tangible and Intangible assets are subject to first charge to secured long-term borrowings from the lenders.

(Rs. in Millions)

Particulars	March 31, 2023				March 31, 2022			
	Face Value Rs.	No of Units	Current	Non-current	Face Value Rs.	No of Units	Current	Non-current
Financial Assets								
Note 5 : Investment								
i) Investments in Mutual Funds (quoted)								
Fair Value Through Profit or Loss (FVTPL)								
Canara Robeco Liquid Fund - Direct Plan - Growth	1,000	18,486.04	49.85	-	1,000	-	-	-
Canara Robeco Overnight Fund - Direct Plan - Growth	1,000	5,174.20	6.00	-	1,000	-	-	-
IDBI Liquid Fund - Direct Plan - Growth	1,000	64,718.69	156.76		1,000	48,116.73	110.24	-
ABSL Liquid Fund - Direct Plan - Growth	100		-	-	100	53,926.78	18.50	-
SBI Liquid Fund - Direct Growth	1,000	2,91,778.24	1,028.03	-	1,000	1,53,238.96	510.75	-
SBI Overnight Fund - Direct Growth	1,000	11,632.96	42.44	-	1,000	5,790.54	20.04	-
			1,283.09	**-**			**659.54**	**-**
Total			**1,283.09**	**-**			**659.54**	**-**
Aggregate book value of quoted investments			**1,271.74**				**658.76**	
Market value of quoted investments			**1,283.09**				**659.54**	
Aggregate amount of unquoted investments			-				-	
Aggregate amount of impairment in value of investments			-				-	
Refer note 31 for determination of fair value of investments			-				-	

(Rs. in Millions)

	March 31, 2023		March 31, 2022	
	Current	**Non-current**	**Current**	**Non-current**
Note 6 : Trade receivable				
(Unsecured, considered good)				
Related parties	0.61	-	0.51	-
Others	84.05	-	51.03	-
Total	**84.67**	**-**	**51.55**	**-**
Less: Allowances for expected credit loss/ bad and doubtful debt	-	-	-	-
Total	**84.67**	**-**	**51.55**	**-**

The Group has not identifed any credit impairment loss as at March 31, 2023 and March 31, 2022.

	March 31, 2023		March 31, 2022	
	Current	**Non-current**	**Current**	**Non-current**
Note 7 : Other financial assets				
(Unsecured, considered good)				
Interest accrued on fixed deposits	11.57	-	25.64	-
Interest receivable from others	3.73	-	23.99	-
Retention money receivable	530.54	-	526.28	-
Receivable from Government Authorities (NHAI)	816.07	-	965.24	-
Other receivable	75.65	-	56.15	-
Security and other deposits	10.99	0.33	6.89	2.74
Total	**1,448.56**	**0.33**	**1,604.18**	**2.74**

(Rs. in Millions)

	March 31, 2023	March 31, 2022
Note 8 : Deferred tax assets		
Deferred tax liabilities (net):		
Deferred tax liabilities:		
Difference in Depreciation and other differences in block of Property, Plant and equipment and Intangible assets as per tax books & financial books	36.80	1,350.50
Deferred tax assets:		
Effect of expenditure debited to profit and loss account in the current year but allowed for tax purposes in following years	-	-
Deferred tax liabilities (net)	**36.80**	**1,350.50**
Deferred tax assets:		
Deferred tax assets:		
Depreciation	-	428.55
MAT credit entitlement	-	582.83
Deferred Tax assets on Fair valuation	792.60	626.79
Deferred Tax Assets	**792.60**	**1,638.17**
Deferred Tax liabilities:		
Difference in Depreciation/ amortisation and other differences		
Tax losses	-	-
Deferred tax (assets) / liabilities	**(755.80)**	**(287.67)**
Note 9 : Other non - current assets		
Duties and taxes receivable	174.07	656.55
Total	**174.07**	**656.55**

(Rs. in Millions)

	March 31, 2023	March 31, 2022
Note 10 : Cash and cash equivalents		
Cash and Bank balances		
Balances with banks:		
-on current accounts	279.37	118.03
-on trust, retention and other escrow accounts*	394.06	161.56
Deposits with banks		
-Original maturity less than 3 months	49.50	-
Cash on hand	8.38	7.64
Total	**731.31**	**287.23**
Note 11 : Bank balance other than cash and cash equivalent		
Maturity more than 3 months less than 12 months		
Other deposits	15.09	102.53
Debt service reserve account with banks /earmarked balance**	3,459.60	2,365.43
Major Maintenance Reserve Account	1,390.00	-
Maturity more than 12 months		
Debt service reserve account with banks /earmarked balance**	-	-
Other deposits	2.00	2.00
Total	**4,866.69**	**2,469.97**

Debt service reserve account/ major maintenance reserve account and trust, retention and other escrow accounts

Bank deposits are marked lien / pledged against the non current secured loan as per term loan agreement with the lender, further the lenders have first charge on trust, retention and other escrow accounts.

* First charge on above to the extent of amount payable as per the waterfall mechanism as defined in the Concession Agreement / Common Loan Agreement.

** The deposits to the extent of Rs. 3,459.60 millions (March 31, 2022 : Rs. 2,365.43 millions) maintained by the Project SPV Group with bank includes time deposits, which are held against Debt Service Reserve (DSR), are considered as current portion under the head “Other bank balances” since the same are encashable by the lenders in the event of default by the Project SPV Group, if any.

Current deposits are made for varying periods of between one day and three months, depending on the immediate cash requirements of the group and earn interest at the respective current deposit rates. Other time deposits earn interest at the rate of 4.70% to 7.95% p.a.

Refer note 16 for details of security against term loans.

For the purpose of statement of cash flows, cash and cash equivalents comprise the following:

(Rs. in Millions)

	March 31, 2023	March 31, 2022
Balance with banks:		
-on current accounts	279.37	118.03
-on trust, retention and other escrow accounts	394.06	161.56
Fixed deposits less than 3 months	49.50	-
Cash on hand	8.38	7.64
Less: Bank overdraft	-	-
Total	**731.31**	**287.23**
Note 12 : Current tax assets (net)		
Advance income-tax (net of provision for tax)	24.81	114.22
Total	**24.81**	**114.22**
Note 13 : Other current assets		
(Unsecured, considered good unless otherwise stated)		
Advance with suppliers		
- Related parties (refer note 34)	1,347.33	502.89
- Others	45.29	32.22
Mobilisation advances (refer note 34)	33.68	435.80
Prepaid expenses	45.88	0.51
Duties and taxes receivable	1,184.89	706.04
Total	**2,657.07**	**1,677.46**

Note : 14 : Unit capital

(Amount in Millions.)

	March 31, 2023		March 31, 2022	
Unit capital				
Authorised Unit capital				
Units having face value of Rs.100 each	87,92,93,265	87,929.33	85,50,43,265	85,504.33
	87,92,93,265	**87,929.33**	**85,50,43,265**	**85,504.33**
Issued Unit capital				
Units having face value of Rs.100 each	87,92,93,265	87,929.33	85,50,43,265	85,504.33
Total	**87,92,93,265**	**87,929.33**	**85,50,43,265**	**85,504.33**

Terms / rights attached to equity shares

The Project SPVs have only one class of equity shares having par value of Rs. 100/- per share Each holder of equity shares is entitled to one vote per share. The Project SPVs declares and pays dividend in Indian rupees.

In the event of liquidation of the Project SPV, the holders of equity shares will be entitled to receive remaining assets of the Project SPV, after distribution of all preferential amounts. The distribution will be in proportion to the number of equity shares held by the shareholders.

Reconciliation of the number of unit outstanding and the amount of Unit capital:

	March 31, 2023		March 31, 2022	
Units issued, subscribed and fully paid	**No. of units**	**Rs.**	**No. of units**	**Rs.**
Units having face value of Rs. 100/-				
At the beginning of the year	85,50,43,265	85,504.33	81,68,80,000	81,688.00
lssued during the year	2,42,50,000	2,425.00	3,81,63,265	3,816.33
At the end of the year	**87,92,93,265**	**87,929.33**	**85,50,43,265**	**85,504.33**

Details of unit holders holding more than 5% units:

	March 31, 2023		March 31, 2022	
	No. of units	**% of total unit capital**	**No. of units**	**% of total unit capital**
IRB Infrastructure Developers Limited	44,84,39,840	51%	43,60,72,332	51%
Anahera Investments Pte Ltd	21,98,23,181	25%	21,37,60,685	25%
Bricklayers Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Chiswick Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Stretford End Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Dangenham Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%

Details of Sponsor units	March 31, 2023		March 31, 2022	
IRB Infrastructure Developers Limited	44,84,39,840	51%	43,60,72,332	51%

Note : 15 : Other equity

Attributable to the equity holders

Other reserves	**March 31, 2023**	**March 31, 2022**
Retained earnings		
At the beginning of the year	(8,108.29)	(3,669.05)
Profit for the year	(2,272.18)	(4,435.98)
Less: Appropriations		
Pre-incoporation Profits		
Unit Issue expenses	(15.33)	(3.26)
At the end of the year	**(10,395.80)**	**(8,108.29)**
Total	**(10,395.80)**	**(8,108.29)**

(Amount in Millions.)

	March 31, 2023	March 31, 2022
Financial liabilities		
Note : 16 : Borrowings		
Non-current Borrowings		
Term loans		
Indian rupee loan from banks (secured)		
Project loans for SPVs	61,005.36	78,298.59
Less : current maturities expected to be settled within 12 month from balance sheet date	(639.16)	(429.15)
Total (a)	**60,366.20**	**77,869.44**
Indian rupee loan from financial institutions (secured)		
Project loans for SPVs	6,931.65	10,328.45
Less : current maturities expected to be settled within 12 month from balance sheet date	(9.75)	(59.79)
Total (b)	**6,921.90**	**10,268.66**
Non-convertible debentures (secured)	33,432.82	5,497.18
Less : current maturities expected to be settled within 12 month from balance sheet date	(130.59)	(110.76)
Total (c)	**33,302.22**	**5,386.42**
Less: Unamortised transaction cost **(d)**	(1,646.37)	(964.70)
Total non current borrowings (e = a + b + c + d)	**98,943.95**	**92,559.82**
Current Borrowings		
Short-term borrowings (secured)		
Current maturity of long term loans		
Indian rupee loan from banks (secured)	639.16	429.15
Indian rupee loan from financial institutions (secured)	9.75	59.79
Non convertible debentures (secured)	130.59	110.76
Interest accrued but not due on borrowings	5.43	33.73
(Unsecured, repayable on demand and interest free)		
Loan from related parties (refer note 34)	5,350.72	4,085.74
Total current borrowings (f)	**6,135.65**	**4,719.18**
Total borrowings (e+f)	**1,05,079.60**	**97,279.00**
Aggregate secured loans	99,723.46	93,159.52
Aggregate unsecured loans	5,350.72	4,085.74

(i) Project loans for SPVs

March 31, 2023: Rs.1,01,369.83 millions; March 31, 2022: Rs. 94,124.22 millions; pertains to term loans taken by SPV's (Special Purpose Vehicles) for Project financing.

Rate of interest

Rate of interest on the Indian Rupee loan from banks and financial institutions varies from 7.75% to 10.75% p.a. (March 31, 2022: 8.25% to 10.40% p.a.) and are secured by pledge of shares of its subsidiaries and subservient charge on the current assets of the company to the extent of 125% of the outstanding loan.

Nature of security

i) Secured by first charge on the movable/immovable asset by way of mortgage/hypothecation; first charge on all intangible assets, present and future; assignment of all receivables; book debts and all rights and interest in project, both present and future, excluding the Project Assets of respective companies;

ii) Secured by first charge on the Escrow Account, Debt Service Reserve Account and any other reserves and other bank accounts of the respective Companies.

iii) An irrevocable and unconditional corporate guarantee from IRB Infrastructure Developers Limited to meet shortfall (if any) between debt due and termination payments received from Concessioning Authority in case of termination of Concession Agreement for any reason in case of Project SPV's.

Repayment terms

The Indian rupee loans are repayable in structured monthly installments commencing after commercial operation date such that the total

tenor does not exceed 17 years and repayable as per the repayment schedule specified in common loan agreement with the Lenders.

Note : 17 : Trade payables

	March 31, 2023	March 31, 2022
Total outstanding dues of micro enterprises and small enterprises (refer note 29)	1.61	3.69
Total outstanding dues of creditors other than micro and small enterprises		
- Related parties (refer note 34)	13,812.18	10,022.93
- Others	1,491.69	1,191.71
Total	**15,305.48**	**11,218.34**

(Rs. in Millions)

	March 31, 2023		March 31, 2022	
	Current	**Non-current**	**Current**	**Non-current**
Note 18 : Other financial liabilities				
Obligation for construction	1,102.31	-	2,009.01	-
Directors sitting fees payable	0.44	-	0.36	-
Deposit	1.18	-	1.13	-
Retention money payable				
- Related parties (refer note 34)	636.46	-	256.48	-
- Others	295.83	2.77	336.92	-
Revenue share payable	345.46	-	225.81	-
Other payable				
- Related parties (refer note 34)	167.70	35,778.03	193.42	35,168.79
Total	**2,549.37**	**35,780.80**	**3,023.13**	**35,168.79**

	March 31, 2023	**March 31, 2022**
Note : 19 : Trade payables		
a) Total outstanding dues of micro enterprises and small enterprises micro and small enterprises		
'- Related parties	4,165.72	5,998.85
	4,165.72	**5,998.85**

Note 20 : Provisions

	March 31, 2023		March 31, 2022	
	Current	**Non-current**	**Current**	**Non-current**
Others				
Major maintenance expenses		2,965.03	-	1,350.57
Total	**-**	**2,965.03**	**-**	**1,350.57**

The movement in provision for resurfacing expenses is as follows:

	March 31, 2023	**March 31, 2022**
Opening balance	1,350.57	357.84
Obligation on new toll projects	1,614.45	992.73
Utilised / reversed during the year	-	-
Closing balance	**2,965.03**	**1,350.57**

The above provisions are based on current best estimation of expenses that may be required to fulfill the resurfacing obligation as per the service concession agreement with regulatory authorities. It is expected that significant portion of the costs will be incurred over the period. The actual expense incurred may vary from the above. No reimbursements are expected from any sources against the above obligation.

	March 31, 2023	**March 31, 2022**
Note 21 : Other current liabilities		
Duties and taxes payable	64.12	129.65
Advance from customer- Others	34.03	10.50
Total	**98.15**	**140.15**

(Amount in Millions.)

	March 31, 2023	March 31, 2022
Note 22 : Revenue from operations		
Contract revenue (road construction)	11,672.04	1,054.48
Income from toll collection (gross)	21,097.46	12,377.44
Less - Revenue Share to NHAI	(5,671.70)	(1,779.36)
Income arising out of toll collection (net)	15,425.76	10,598.07
Revenue share to NHAI- Fastag	(185.44)	(212.87)
Other operating revenue	0.23	965.16
Total	**26,912.59**	**12,404.84**
Note 23 : Other income		
Interest income on		
- Bank deposits	178.88	73.64
- Others	7.17	8.05
Profit on sale of investments	62.95	13.93
Fair value gain on mutual funds	11.35	0.78
Other non operating income	2.73	3.73
Total	**263.08**	**100.13**
Note 24 : Road work and site expenses		
Contract expenses	11,330.91	1,036.47
Operation and maintenance expenses	1,471.41	939.15
Site and other direct expenses	0.00	-
Sub-contracting / Security expenses	0.35	0.72
Technical consultancy and supervision charges	62.84	53.20
Total	**12,865.52**	**2,029.53**
Note 25 : Depreciation and amortisation expenses		
Depreciation on property, plant and equipment (refer note 4)	1.25	1.74
Amortisation on intangible assets (refer note 4)	2,809.17	1,673.16
Total	**2,810.42**	**1,674.90**
Note 26 : Finance cost		
Interest expense		
- Banks and financial institutions	7,387.76	8,670.13
- Debentures	1,617.52	-
- Unwinding of retention money	-	48.71
Other borrowing costs		
- Amortisation of Transaction cost	128.80	78.02
- Unwinding of discount on provision of MMR	143.04	39.64
- Interest unwinding on loan/retention money	48.71	-
- Interest unwinding of Trade Payable- Associates	765.06	655.78
- Others	163.82	46.44
Total	**10,254.69**	**9,538.70**

(Amount in Millions.)

	March 31, 2023	March 31, 2022
Note 27 : Other expenses		
Rent	0.03	0.24
Rates and taxes	81.75	31.64
Water charges	-	-
Travelling and conveyance	0.01	-
Director sitting fees	1.83	1.61
Legal and professional expenses	163.58	186.84
Corporate social responsibilities expenditure	-	8.00
Donations	2.50	-
Bank charges	2.83	5.54
Miscellaneous expenses	3.76	1.19
Fair value loss on measurement of other payable	-	-
Total	**256.29**	**235.06**

Note 27A : Payment to auditor (including GST)

As auditors:		
- Statutory audit fees	1.42	1.23
- Limited review fees	2.05	1.70
In other capacity	-	-
- Other services (certification fees)	1.37	0.17
Reimbursement of expenses	0.20	0.04
Total	**5.04**	**3.13**

Note 28 : Commitment and Contingencies

a. Leases
Rent / lease payments under operating lease are recognised as an expense in the Consolidated Statement of profit and loss on a straight line basis over the lease term.

Operating lease

(Rs in millions)

	March 31, 2023	March 31, 2022
a) Future lease rental payments under non-cancellable operating lease are as follows:-		
i) Not later than one year	-	-
ii) Later than one year and not more than five year	-	-
iii) Later than five year	-	-
b) Lease payment recognised in the consolidated statement of profit and loss	0.03	0.24
c) General description of the leasing agreement		
i) Leased assets – accommodation for employees	-	-
ii) Future lease rentals are determined on agreed terms	-	-

b. Capital commitments

	March 31, 2023	March 31, 2022
Estimated value of contracts in capital account remaining to be executed	14,295.07	625.98

c. Contingent liabilities
Contingent liabilities not provided for

	March 31, 2023	March 31, 2022
Guarantees given by the Group to suppliers, government bodies and performance guarantee		
For Service Tax, ESIC, Custom Duty, Other Finance expenses and Stamp duty matters	-	-
Total	-	-

UTL, CGTL and KGTL have filed Writ petition with Hon'ble Rajasthan High Court with prayer to commence payment of Premium to National Highways Authority of India (NHAI) six months post actual completion of the project construction work. The Hon'ble High Court prima facie agreed with the contention of these companies and had provided interim relief from payment of premium. Vide judgement order dated 25th August, 2021, the Hon'ble High Court found merit in the contention of the companies and has directed the parties to resolve the dispute under Arbitration. The said matter is currently pending under Arbitration.
During the year premium payment to NHAI has been commenced in IRBHM and KGTL.

Note 29 : Trade payable

Under the Micro, Small and Medium Enterprises Development Act, 2006 ('MSMED') which came into force from 2 October 2006, certain disclosures are required to be made relating to Micro, Small and Medium enterprises. On the basis or the informntion and records available with the management, there are no overdue amount to the Micro and Small enterprises as defined in the Micro, Small Medium Enterprises Development Act, 2006 as set out in the following disclosures:

The disclosure in respect of the amount payable to enterprises which have provided goods and services to the Group and which qualify under the definition of micro and small enterprises, as defined under Micro, Small and Medium Enterprises Development Act, 2006 has been made in the consolidated financial statement as at March 31, 2023 based on the information received and available with the Group.

Particulars	March 31, 2023	March 31, 2022
Principal amount remaining unpaid to any supplier as at the period end	1.61	3.69
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

a) MSME ageing schedule as at

Particulars	March 31, 2023	March 31, 2022
MSME Undisputed Dues	-	-
Less than 1 year	1.61	3.69
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total dues to micro and small enterprises as per MSMED Act, 2006	**1.61**	**3.69**

There are no disputed dues to micro and small enterprises as per MSMED Act, 2006. The amounts payable to MSME are not due for payments.

b) Ageing of creditors other than micro enterprises and small enterprises as at

Particulars	March 31, 2023	March 31, 2022
Undisputed Dues		
Less than 1 year	7,438.37	13,369.16
1-2 Years	9,433.59	3,808.21
2-3 Years	2,559.45	12.82
More than 3 years	38.18	23.32
Total dues to creditors other than micro enterprises and small enterprises as at	**19,469.59**	**17,213.50**

There are no disputed dues to creditors other than micro enterprises and small enterprises.

c) out of the above unbilled amount	2,660.17	3,191.66

Note 30 : Intangble Asset under development ageing schedule

a) Intangible asset under development

(Rs in millions)

Particulars	March 31, 2023	March 31, 2022
Less than 1 year	2,339.97	1,055.74
1-2 Years	54.59	59.90
2-3 Years	27.11	175.24
More than 3 years		-
Total	**2,421.67**	**1,290.89**

b) Intangible asset under development

Particulars	March 31, 2023	March 31, 2022
To be completed in		
Less than 1 year	2,421.67	1,290.89
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total	**2,421.67**	**1,290.89**

Note 31 : Fair values

The carrying values of financials instruments of the Group are reasonable and approximations of fair values.

	Carrying amount		Fair Value	
	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022
Financial assets				
Financial assets measured at amortised cost				
Loans	-	-	-	-
Other Financial assets	1,448.89	1,606.92	1,448.89	1,606.92
Financial assets measured at fair value through statement of Profit & Loss				
Investments (Quoted)	1,283.09	659.54	1,283.09	659.54
Financial assets measured at amortised cost				
Investments (Unquoted)	-	-	-	-
Trade receivable	84.67	51.55	84.67	51.55
Cash and cash equivalents	731.31	287.23	731.31	287.23
Other Bank balances	4,866.69	2,469.97	4,866.69	2,469.97
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	19,471.20	17,217.19	19,471.20	17,217.19
Borrowings	1,05,079.60	97,279.00	1,05,079.60	97,279.00
Other financial liabilities	38,330.17	38,191.92	38,330.17	38,191.92

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the Group has determined that market participants would take into account when pricing the investments.

Note 32 : Fair value hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price in active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2023:

(Rs in millions)

	As on Mar 31, 2023	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	**1,283.09**	1,283.09	-	-
Trade Receivable	**84.67**	-	-	84.67
Cash and cash equivalents	**731.31**	-	-	731.31
Bank balance other than above	**4,866.69**	-	-	4,866.69
Loans	**-**	-	-	-
Other Financial assets	**1,448.89**	-	-	1,448.89
Liabilities				
Borrowings	**1,05,079.60**	-	-	1,05,079.60
Trade Payable	**19,471.20**	-	-	19,471.20
Other financial liabilities	**38,330.17**	-	-	38,330.17

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2022:

(Rs in millions)

	As on Mar 31, 2022	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	**659.54**	659.54	-	-
Trade Receivable	**51.55**	-	-	51.55
Cash and cash equivalents	**287.23**	-	-	287.23
Bank balance other than above	**2,469.97**	-	-	2,469.97
Loans	**-**	-	-	-
Other Financial assets	**1,606.92**	-	-	1,606.92
Liabilities				
Borrowings	**97,279.00**	-	-	97,279.00
Trade Payable	**17,217.19**	-	-	17,217.19
Other financial liabilities	**38,191.92**	-	-	38,191.92

There has been no transfer between Level 1, Level 2 & Level 3 during the year.

Note 33 : Financial risk management objectives and policies

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities.

The Board of Directors have overall responsibility for the establishment and oversight of the Group's risk management framework.

In performing its operating, investing and financing activities, the Group is exposed to the Credit risk, Liquidity risk and Currency risk.

Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits, FVTOCI investments and derivative financial instruments.

Credit risk on financial assets

Credit risk is the risk that counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Company is exposed to credit risk from its operating activities (primarily trade receivables) and from its financing activities, including deposits with banks and financial institutions, foreign exchange transactions and other financial instruments.

Financial instruments

Credit risk from balances with banks, trade receivables, loans and advances and financial institutions is managed by the Group's management in accordance with the Group's policy. Investments of surplus funds are made only with approved counterparties and within credit limits assigned to each counterparty. Counterparty credit limits are reviewed by the top management on an annual basis, and may be updated throughout the year subject to approval of the Company's board of directors. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through counterparty's potential failure to make payments.

Trade receivables and Loans and Advances

Customer credit risk and Loans and advances is managed by each business unit subject to the Group's established policy, procedures and control relating to customer credit risk management. An impairment analysis is performed at each reporting date on an individual basis for major trade receivables and loan and advances. The Group has not identifed any impairment loss as at March 31, 2023.

The following table provides information about the ageing of gross carrying amount of trade recievables as at :

(Rs in millions)

Gross Carrying Amount	**March 31, 2023**	**March 31, 2022**
Undisputed Trade recievables -		-
Less than 6 months	33.02	-
6 months - 1 year	0.10	29.37
1-2 Years	29.37	0.51
2-3 Years	0.51	21.66
More than 3 years	21.66	
Total	**84.67**	**51.55**

Other financial assets

Credit risk from balances with banks and financial institutions is managed by the Group in accordance with the Group's policy. Investments of surplus funds are made only in highly marketable debt instruments with appropriate maturities to optimise the cash return on instruments while ensuring sufficient liquidity to meet its liabilities.

Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The

Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates.

The Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate borrowings.

Interest rate sensitivity

The following table demonstrates the sensitivity to a reasonably possible change in interest rates on that portion of loans and borrowings affected, after excluding the credit exposure on fixed rate borrowing. With all other variables held constant, the Group's profit before tax is affected through the impact on floating rate borrowings, as follows:

(Rs in millions)

	Borrowings	Fixed Deposits	Borrowings	Fixed Deposits
Balance of Fixed Deposit and Borrowings	March 31, 2023		March 31, 2022	
- INR Millions	1,01,369.82	4,866.69	94,124.22	2,469.97
Increase in basis points				
- INR	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax				
- INR Millions	(506.85)	24.33	(470.62)	12.35
Decrease in basis points				
- INR	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax				
- INR Millions	506.85	(24.33)	470.62	(12.35)

Liquidity risk

Liquidity risk is the risk that the Group may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Group's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements. The Group closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt from banks at an optimised cost.

The table below summarises the maturity profile of the Group's financial liabilities based on contractual undiscounted payments:

As at March 31, 2023	Carrying amt	Total	On Demand	Less than 1 year	1 to 5 years	> 5 years
Long term Borrowings (Gross of unamortised transaction cost)	1,06,725.97	1,06,725.97	5,350.72	784.93	17,853.83	82,736.49
Other financial liabilities	38,330.17	38,330.17	-	2,549.37	35,780.80	-
Trade payables	19,471.20	19,471.20	-	15,305.48	4,165.72	
Total	**1,64,527.34**	**1,64,527.34**	**5,350.72**	**18,639.78**	**57,800.35**	**82,736.49**

As at March 31, 2022	Carrying amt	Total	On Demand	Less than 1 year	1 to 5 years	> 5 years
Long term Borrowings (Gross of unamortised transaction cost)	98,243.70	98,243.70	4,085.74	633.43	14,152.24	79,372.29
Other financial liabilities	38,191.92	38,191.92	-	3,023.13	35,168.79	-
Trade payables	17,217.19	17,217.19	-	11,218.34	5,998.85	-
Total	**1,53,652.81**	**1,53,652.81**	**4,085.74**	**14,874.90**	**55,319.88**	**79,372.29**

IRB Infrastructure Trust
Notes to Condensed Interim Special Purpose Consolidated / Combined Financial Statements

Note 34 : Related party disclosures

List of Related parties of the Fund

(i)	Parties to the InvIT	IRB Infrastructure Developers Limited (Sponsor and Project Manager)
		MMK Toll Road Private Limited (Investment Manager)
		IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
(ii)	Associates, Promoters, Directors and Partners of the persons mentioned in clause (i) and (ii)	As per table below

List of associates, promoters, directors and partners of the persons mentioned in clause (i) and (ii)

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manager)**	**MMK Toll Road Private Limited (Investment Manager)**	**IDBI Trusteeship Services Limited (Trustee of IRB Infrastructure Trust)**
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Virendra D. Mhaiskar (HUF)	IRB Infrastructure Developers Limited (IRBIDL)	IDBI Bank Limited LIC Corporation Limited General Insurace Corporation
Directors	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Jose Tamariz Martel Goncer Mr. Ravindra Dhariwal **Independent Directors** Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Mrs. Priti Savla	Mr. Virendra D. Mhaiskar Mr. Kunnasagaran Chinniah **Independent Directors** Mr. K G Krishnamurthy Mrs. Ranjana Paranjape	Mr. Samuel Joseph Jebaraj Mr. Pradeep Kumar Jain Mrs. Jayashree Vijay Ranade Mr. Pradeep Kumar Malhotra Ms. Baljinder Kaur Mandal
Associates	**A) Holding Company of Sponsor / Project Manager** IRB Holding Private Limited (Formerly Mhaiskar Ventures Private Limited) **B) Subsidiary Companies of Sponsor / Project Manager** **Project SPVs** 1. IRB Westcoast Tollway Limited (IRBWTL) 2. Solapur Yedeshi Tollway Limited (SYTL) 3. Yedeshi Aurangabad Tollway Limited (YATL) 4. Kaithal Tollway Limited (KTL) 5. AE Tollway Limited (AETL) 6. Udaipur Tollway Limited (UTL) 7. CG Tollway Limited (CGTL) 8. Kishangarh Gulabpura Tollway Limited (KGTL) 9. IRB Hapur Muradabad Tollway Limited (IRBHMTL) 10. Palsit Dankuni Tollway Private Limited (PDTPL) **Others** 1. Ideal Road Builders Private Limited (IRBPL) 2. Mhaiskar Infrastructure Private Limited (MIPL) 3. Modern Road Makers Private Limited (MRMPL) 4. Aryan Toll Road Private Limited (ATRPL) 5. ATR Infrastructure Private Limited (ATRFL) 6. IRB Infrastructure Private Limited (IRBFL) 7. Thane Ghodbunder Toll Road Private Limited (TGTRPL) 8. Aryan Infrastructure Investments Private Limited (AIIPL) 9. IRB MP Expressway Private Limited (formerly known as NKT Road and Toll Private Limited) 10. MMK Toll Road Private Limited (MMK) 11. IRB Kolhapur Integrated Road Development Company Private Limited (IRBK) 12. Aryan Hospitality Private Limited (AHPL) 13. IRB Sindhudurg Airport Private Limited (IRBSA) 14. IRB Goa Tollway Private Limited (IRB Goa) 15. IRB PS Highway Private Limited (formerly known as MRM Highways Private Limited) (IRBPS) 16. IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV) 17. MRM Mining Private Limited (Formerly "J J Patel Infrastructural and Engineering Private Limited") (Subsidiary of MRMPL) 18. GE1 Expressway Private Limited (formerly known as IRB PP Project Private Limited) 19. VK1 Expressway Private Limited (VK1) 20. Modern Estate (Partnership Firm) 21. Pathankot Mandi Highway Private Limited 22. Chittoor Thachur Highway Private Limited 23. Meerut Budaun Expressway Limited - Subsidiary upto October 14, 2022 and Entity with Joint Control w.e.f. October 15,2022 24. VM7 Expressway Private Limmited 25. Samakhiyali Tollway Private Limited w.e.f 14.03.2023		

C) Other Associate Companies of Sponsor / Project Manager

1. Virendra D. Mhaiskar (HUF)
2. VCR Toll Services Private Limited
3. VDM Ventures Private Limited
4. DEUX Farming Films Private Limited
5. IRB Charitable Foundation

Key Managerial personnel of Project SPV Group (Only with whom Project SPV Group had transactions during the year/ there was balance outstanding at the year end)

1. Ms. Shilpa Todankar
2. Mr. Abhay Phatak (w.e.f. March 09, 2022)
3. Mr. Darshan Sangurdekar
4. Mr. Omprakash Singh
5. Mr. Chandrashekhar Kaptan
6. Mrs. Ranjana Paranjape (w.e.f October 06, 2021)
7. Mrs. Arati Taskar
8. Mr. Sudhir Rao Hoshing
9. Mr. Amitabh Murarka
10. Mr. Jitendra Sharma (upto February 28, 2022)
11. Mrs. Heena Raja (upto October 01, 2021)

I. Related Party Transactions

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidiaries of Project SPV Group		Key Management Personnel of Project SPV Group		Trustee of IRB Infrastructure Trust	
		March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022
1	**Contract expenses**	-	-	-	-	**858.69**	**629.52**	-	-	-	-
	IRB Infrastructure Developers Limited	-	-	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	858.69	629.52	-	-	-	-
2	**Operation & Main. Expenses**	**2,719.41**	**1,906.45**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	2,719.41	1,906.45	-	-	-	-	-	-	-	-
3	**Finance Cost -Interest unwinding on Trade payable**	-	-	-	-	**765.06**	**655.79**	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	765.06	655.79	-	-	-	-
4	**Mobilisation advances recovered**	**509.07**	**743.02**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	509.07	743.02	-	-	-	-	-	-	-	-
5	**Material Aggregate Purchase**	-	-	-	-	**588.05**	**1,555.19**	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	588.05	1,555.19	-	-	-	-
6	**Advance given including BG margin given**	**896.12**	**451.03**	-	-	-	**62.57**	-	-	-	-
	IRB Infrastructure Developers Limited	896.12	451.03	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-			-	62.57	-	-	-	-
7	**General advance recovered - EPC**	-	**394.25**	-	-	-	**62.48**	-	-	-	-
	IRB Infrastructure Developers Limited	-	394.25	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-			-	62.48	-	-	-	-
8	**Construction cost**	**11,171.92**	**8,484.71**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	11,171.92	8,484.71	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-			-	-	-	-	-	-
9	**Amount held up**	**77.81**	-	-	-	**74.86**	**2.76**	-	-	-	-
	IRB Infrastructure Developers Limited	77.81	-	-	-						
	Modern Road Makers Private Limited	-	-			74.86	2.76	-	-	-	-
10	**Retention / Held up release during Year**	-	-	-	-	**45.63**	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	45.63	-	-	-	-	-
11	**Other payable**	**560.52**	**2,161.31**	-	-	**48.73**	**48.71**	-	-	-	-
	IRB Infrastructure Developers Limited	560.52	2,161.31	-	-	-	-	-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	-	-	-	48.71	48.71	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	0.02	-	-	-	-	-
12	**Expenses incurred on our behalf**	-	**1.77**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	-	1.77	-	-	-	-	-	-	-	-
13	**Unsecured Loan received**	**1,532.48**	**4,759.00**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	1,532.48	4,759.00	-	-	-	-	-	-	-	-
14	**Unsecured Loan repaid**	**267.50**	**4,828.83**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	267.50	4,828.83	-	-	-	-	-	-	-	-
15	**Units Issued**	**1,236.75**	**1,946.33**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	1,236.75	1,946.33	-	-	-	-	-	-	-	-
16	**Trade payable**	**212.45**	-	-	**12.88**	**12.80**		-	-	-	-
	IRB Infrastructure Developers Limited	212.45	-	-	-	-		-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	12.80		-	-	-	-
	MMK Toll Road Private Limited	-	-	-	12.88	-		-	-	-	-
17	**Additional Intangible Asset**	-	-	-	-	-	**7,148.39**	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	-	7,148.39	-	-	-	-
18	**Deletion Intangible Asset**	-	-	-	-	**23.46**	-	-	-	-	-
	Modern Road Makers Limited	-	-	-	-	23.46	-	-	-	-	-
19	**Interest unwinding of Intangible Asset**	-	-	-	-	**33.74**	-	-	-	-	-
	Modern Road Makers Limited	-	-	-	-	33.74	-	-	-	-	-

IRB Infrastructure Trust
Notes to Consolidated Financial Statements for the year ended March 31, 2023

I. Related Party Transactions

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidiaries of Project SPV Group		Key Management Personnel of Project SPV Group		Trustee of IRB Infrastructure Trust	
		March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022
20	**Investment Management Fees**	**-**	**-**	**56.52**	**42.48**	-	-	**-**	**-**	**-**	**-**
	MMK Toll Road Pvt Limited	-	-	56.52	42.48	-	-	-	-	-	-
21	**Trustee Fees**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**5.30**	**3.33**
	IDBI Trusteeship Services Limited	-	-	-	-	-	-	-	-	5.30	3.33
22	**Director sitting fees paid**	**-**	**-**	**-**	**-**	**-**	**-**	**1.83**	**1.65**	**1.83**	**1.65**
	Mrs. Arati Taskar	-	-	-	-	-	-	0.06	-	0.06	-
	Mr. Darshan Sangurdekar	-	-	-	-	-	-	0.22	0.23	0.22	0.23
	Mr.Omprakash Singh	-	-	-	-	-	-	0.19	0.23	0.19	0.23
	Mr. Sudhir Hoshing	-	-	-	-	-	-	0.06	-	0.06	-
	Mr. Jitendra Sharma	-	-	-	-	-	-	-	0.41	-	0.41
	Mrs. Heena Raja	-	-	-	-	-	-	-	0.06	-	0.06
	Mr. C S Kaptan	-	-	-	-	-	-	0.33	0.39	0.33	0.39
	Ms. Shilpa Todankar	-	-	-	-	-	-	0.51	0.26	0.51	0.26
	Mrs.Ranjana Paranjape	-	-	-	-	-	-	0.13	0.05	0.13	0.05
	Mr. Abhay Pathak	-	-	-	-	-	-	0.25	0.02	0.25	0.02
	Mr. Amitabh Murarka	-	-	-	-	-	-	0.06	-	0.06	-

IRB Infrastructure Trust
Notes to Condensed Interim Special Purpose Consolidated / Combined Financial Statements

II. Related party balances

(Rs. in millions)

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidaries of Project SPV Group		Key Management Personnel of Project SPV Group	
		March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022
1	**Short-term borrowings**	**477.81**	**477.81**	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	477.81	477.81	-	-	-	-	-	-
2	**Trade payable**	**4,931.60**	**1,189.05**	**78.54**	**80.31**	**12,475.69**	**11,888.28**	-	-
	IRB Infrastructure Developers Limited	4,931.60	1,189.05	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	12,475.69	11,888.28	-	-
	MMK Toll Road Private Limited	-	-	78.54	80.31	-	-	-	-
3	**Mobilisation advances**	**33.68**	**435.80**	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	33.68	435.80	-	-	-	-	-	-
4	**Advance given**	**451.18**	**502.86**	-	-	**0.03**	**0.03**	-	-
	IRB Infrastructure Developers Limited	451.18	502.86	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	0.03	0.03	-	-
5	**Retention payable**	-	-	-	-	**281.35**	**256.49**	-	-
	Modern Road Makers Private Limited	-	-	-	-	281.35	256.49	-	-
6	**Other payable including BG margin payable**	**32,246.65**	**31,711.77**	-	-	**3,697.39**	**3,648.68**	-	-
	IRB Infrastructure Developers Limited	32,246.65	31,711.77	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	1,800.84	1,800.83	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	1,544.86	1,544.86	-	-
	Mhaiskar Infrastructure Private Limited	-	-	-	-	351.69	302.98	-	-
7	**Other payable (Exp incurred on our behalf)**	**1.77**	**1.77**	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	1.77	1.77	-	-	-	-	-	-
8	**Unsecured Loan / other payable**	**4,872.91**	**3,607.93**	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	4,872.91	3,607.93	-	-	-	-	-	-
9	**Trade Receivable**	-	-	-	-	**0.61**	**0.51**	-	-
	Modern Road Makers Private Limited	-	-	-	-	0.61	0.51	-	-
10	**Expense payable**	**491.53**	**938.23**	-	-	-	-	**0.51**	-
	IRB Infrastructure Developers Limited	491.53	938.23	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-			-	-	-	-
	IDBI Trusteeship Services Limited							0.51	-
11	**Other receivable**	-	-	**0.08**	-	-	-	-	-
	MMK Toll Road Private Limited	-	-	0.08	-	-	-	-	-
12	**Director sitting fees Payable**	-	-	-	-	-	-	**0.44**	**0.43**
	Mr. Mukeshlal Gupta	-	-	-	-	-	-	-	-
	Mr. Dhananjay K. Joshi	-	-	-	-	-	-	-	-
	Mr. Ajay P. Deshmukh	-	-	-	-	-	-	-	-
	Mr. Rajendra kumar Agarwal	-	-	-	-	-	-	-	0.01
	Mrs. Aarti Taskar	-	-	-	-	-	-	0.01	-
	Mr. Darshan Sangurdekar	-	-	-	-	-	-	0.05	0.05
	Mr. Omprakash Singh	-	-	-	-	-	-	0.04	0.05
	Mr. Sudhir Hoshing	-	-	-	-	-	-	0.01	-
	Mr. Jitendra Sharma	-	-	-	-	-	-	0.02	0.09
	Mr. Rajpaul S. Sharma	-	-	-	-	-	-	-	-
	Mrs. Heena Raja	-	-	-	-	-	-	-	-
	Mr. C S Kaptan	-	-	-	-	-	-	0.08	0.11
	Mrs. Kshama Vengsarkar	-	-	-	-	-	-	-	-
	Miss Shilpa Todankar	-	-	-	-	-	-	0.13	0.09
	Mr. Abhay Pathak	-	-	-	-	-	-	0.07	-
	Mr. Amitabh Murarka	-	-	-	-	-	-	0.01	-
	Mrs. Ranjana Paranjape	-	-	-	-	-	-	0.03	0.03

Note 35 : Capital management

Capital includes equity attributable to the unitholders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise unitholder value. The Group manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the Project SPV Group may adjust the dividend payment to unitholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the year ended March 31, 2023.

The Group monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

	March 31, 2023	March 31, 2022
Borrowings	1,05,079.60	97,279.00
Less: cash and cash equivalents (Note 10)	(731.31)	(287.23)
Net debt	1,04,348.29	96,991.77
Equity (Note 14 and 15)	77,533.53	77,396.04
Total equity	77,533.53	77,396.04
Capital and net debt	1,81,881.82	1,74,387.81
Gearing ratio (%)	57.37%	55.62%

In order to achieve this overall objective, the Group's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period.

Note 36: Details of Project management fees and Investment management fees

Details of fees paid to project manager and investment manager as required pursuant to SEBI Circular No, CIRIMD/DFIl27i2016, dated November 29,2016 are as under:

i) Project Management Fees

In accordance with the Project Implementation Agreements, the fees and remuneration payable by the Project SPVs to the Project Manager has been worked out and agreed upon for the duration of current financial year, between the Project Manager, Investment Manager and the respective Project SPV, on an arm's length basis, after taking into account the extent of work to be done in respect of maintenance and other services to be provided by the Project Manager to such Project SPV.

ii) Investment Management Fees

Pursuant to the terms of the Investment Management Agreement, the fees will be paid to the Investment Manager for the services provided by it ("Management Fees"). The Management Fees have been revised for the Financial Year with the approval of the Unitholders, where the votes cast by Unitholders so entitled and voting in favor of a resolution are not less than one-and-a-half times the votes cast against such resolution. Pursuant to a resolution of the Unitholders, the Management Fees for the Financial Year 2023 has been revised to Rs.47.70 millions

Note 37: Revenue share / premium payment to NHAI

(a) During the year ended March 31, 2023, the Group has paid/accrued Rs. 5,671.70 millions (March 31, 2022, Rs. 1,779.36 millions) as Revenue Share to National Highways Authority of India ("NHAI") out of its toll collection in accordance with the Concession Agreements entered with NHAI. Income from Operations in the financials for the above periods is net off the above Revenue Share to NHAI.

(b) During the year ended March 31, 2017, AE Tollway Limited (AETL) has entered into a Concession agreement (CA) with NHAI for a period of 24 years. As per the terms of the CA, AETL has agreed to pay a premium in the form of "Additional Concession Fee" equal to Rs. 810.00 millions for the first year and each subsequent year such premium shall be determined by increasing the amount of premium in the respective year by an additional 5% as compared to the immediately preceding year. Management based on the legal opinion obtained and their evaluations of the terms of the CA, believes that such premium payable is restricted to the toll collection during the year and is in the form of revenue sharing arrangement. Accordingly, the premium payable for the year is accounted for as revenue share. The said treatment has been followed in case of KGTL and IRBHM where premium payment has commenced during the current year.

Note 38: Grant from Government Authorities

As per Article 25 of the respective Concession Agreement with the National Highways Authority of India ('NHAI' or 'the Grantor'), the Concessionaires are

entitled to receive Grant for meeting the part of the project cost subject to the conditions laid down in the concession agreement. The details are as under:

(Rs in millions)

Name of the Company	Eligible for Grant	Grant received in FY 2016-17	Grant received in FY 2017-18	Grant received in FY 2018-19	Grant yet to be received
SYTL	1,890.00	1,391.70	403.80	**94.50**	-
KTL	2,340.00	1,533.79	806.21	**-**	-
YATL	5,580.00	-	4,230.24	**1,349.76**	-
IRBWTL	5,362.20	4,512.30	-	**849.90**	-
Total	**15,172.20**	**7,437.79**	**5,440.25**	**2,294.16**	**-**

Note 39 : Events after reporting period

The Trust has been listed on NSE from April 3, 2023.

Note 40: Information on segment reporting pursuant to Ind AS 108 - Operating Segments

The Project SPV Group has identified business segment in accordance with Indian Accounting Standard 108 "Operating Segment" notified under section 133 of the Companies Act 2013, read together with relevant rules issued thereunder. The Group has identified Built, Operate and Transfer ('BOT') as its single reportable segment. Moreover the Group's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

IRB Infrastructure Trust
Notes to Condensed Interim Special Purpose Consolidated / Combined Financial Statements

Note 41 : Debt payment history

(Amount in Millions.)

Particulars	Opening Balance as on April 1, 2022	Loan availed during the period	Loan repaid during the period	Closing Balance as at March 31, 2023
Secured loan from Bank and Financial Institution	88,627.04	5,109.36	25,799.39	67,937.01
Debenture	5,497.18	28,060.00	124.36	33,432.82
Loan from related party	4,085.74	1532.48	267.5	5,350.72
Total	**98,209.96**	**34,701.84**	**26,191.25**	**1,06,720.55**

Particulars	Opening Balance as on April 1, 2021	Loan availed during the period	Loan repaid during the period	Closing Balance as at March 31, 2022
Secured loan from Bank and Financial Institution	85,269.71	4,066.31	708.98	88,627.04
Debenture	5,563.63		66.45	5,497.18
Loan from related party	4,155.57	3746.5	3816.326547	4,085.74
Total	**94,988.91**	**7,812.81**	**4,591.75**	**98,209.96**

Note 42: Capitalisation Statement

Particulars	As at Mar 31, 2023
Shareholders' Funds:	
Unit Capital	87,929.33
Subordinate Debt	
Other Equity	(10,395.80)
Minority interest	0.81
Total Shareholders' Funds	**77,534.34**
Borrowings	
Borrowings from related parties	5,350.72
Long term borrowings	98,943.95
Current maturities of long term borrowings	784.93
Total Debt	**1,05,079.60**
Total Capitalisation	**1,82,613.94**

Note 43: Earnings Per Unit (EPU)

EPU amounts are calculated by dividing the profit for the period attributable to unit holders by the weighted average number of Units outstanding during the year.

The following reflects the income and share data used in the EPU computations:

(Rs in millions)

	March 31, 2023	March 31, 2022
Profit attributable to unit holders for earnings	(2,271.59)	(4,435.98)
Weighted average number of Units for EPU	87,79,64,498	84,29,14,666
Face value per unit (in Rs)	100	100
Earning per unit (in Rs.)	(2.59)	(5.26)

Note 44 : Corporate Social Responsibility (CSR) Activities :

(₹ in Millions)

	As at March 31, 2023	As at March 31, 2022
Gross amount required to be spent by the company during the period	-	5.69

a) Amount spent during the year ending on March 31, 2023	In cash	Yet to be paid in	Total
i) Construction/acquisition of any asset	-	-	-
ii) On purposes other than (i) above (including previous year unspent amount)	-	-	-
	-	-	-

	In cash	Yet to be paid in	Total
a) Amount spent during the year ending on March 31, 2022			
i) Construction/acquisition of any asset	-	-	-
ii) On purposes other than (i) above	8.00	-	8.00
b) Yet to be paid in cash for ongoing project	-	-	-
	8.00	-	**8.00**

Amount spent in the current is inclusive of unspent amount of precious year

Note 45 : Contributed Equity

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

Note 46 : Other Statutory information

i) The Group have not traded or invested in Crypto currency or Virtual Currency during the financial year.

ii) The Group does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the Group.

iii) The Group do not have any transactions with companies struck off.

iv) The Group have not any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961 (such as, search or survey or any other relevant provisions of the Income Tax Act, 1961.

v) The Group did not have any long-term contracts including derivative contract for which there were any material foreseeable losses.

vi) The Group has not declared a wilful defaulter by any bank/ financial institution or any other lender during the year.

Note 47 : Previous year comparatives

Previous period's figures have been regrouped/reclassified, wherever necessary, to confirm current period's classification.

Note 48 : Disclosure pursuant to Appendix - A to Ind AS 11 - " Service Concession Arrangements" ('SCA')

(A) Disclosures with regard to Toll Collection Rights (Intangible Assets)

Sr. No.	Name of Concessionaire	Start of concession period under concession agreement (Appointed date)	End of concession period under concession agreement	Period of concession since the appointed date	Construction completion date or expected construction completion date, as applicable
1	IRB Westcoast Tollway Limited	March 3, 2014	March 2, 2042	28 years	June 30, 2022
2	Solapur Yedeshi Tollway Limited	January 21, 2015	January 20, 2044	29 years	October 15, 2019
3	Yedeshi Aurangabad Tollway Limited	July 1, 2015	June 30, 2041	26 years	September 24, 2020
4	Kaithal Tollway Limited	July 15, 2015	July 14, 2042	27 years	March 29, 2019
5	AE Tollway Limited	August 1, 2016	July 31, 2040	24 years	November 24, 2020
6	Udaipur Tollway Limited	September 3, 2017	September 2, 2038	21 years from Appointed Date	June 01, 2021
7	CG Tollway Limited	November 4, 2017	November 3, 2037	20 years from Appointed Date	August 14, 2021
8	Kishangarh Gulabpura Tollway Limited	February 21, 2018	February 20, 2038	20 years from Appointed Date	June 30, 2022
9	IRB Hapur Moradabad Tollway Limited	May 28, 2019	May 26, 2041	22 years from Appointed Date	June 30, 2022
10	Palsit Dankuni Tollway Private Limited	April 2, 2022	April 1, 2039	17 years from Appointed Date	Under construction

Note:

The above BOT/ DBFOT projects shall have following rights/ obligations in accordance with the Concession Agreement entered into with the Respective Government Authorities:-

a. Rights to use the Specified assets
b. Obligations to provide or rights to expect provision of services
c. Obligations to deliver or rights to receive at the end of the Concession.

Note 49 : Segment reporting

The Group's activities comprise of Toll collection in various parts of India based on the guiding principles given in Ind AS - 108 "Operating Segments", this activity falls within a single operating segment and accordingly the disclosures of the standard have not separately been given.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

Place : Mumbai
Date: 12.05.2023

gokhale & sathe (regd.)
chartered accountants
308/309, Udyog Mandir No. 1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016

INDEPENDENT AUDITOR'S REPORT
To the Unit Holders of IRB Infrastructure Trust
REPORT ON THE AUDIT OF THE CONSOLIDATED IND AS FINANCIAL STATEMENTS

OPINION

We have audited the accompanying Consolidated Ind AS Financial Statements of IRB Infrastructure Trust ("the InvIT" or "the Trust") and its subsidiaries (the Trust and its subsidiaries together referred to as "the Group"), which comprise the Consolidated Balance Sheet as at 31 March 2022, the Consolidated Statement of Profit and Loss including Other Comprehensive Income, the Consolidated Statement of Cash Flows, the Consolidated Statement of Changes in Unit Holder's Equity and the Consolidated Statement of Total Returns at Fair Value for the year ended 31 March 2022, the Consolidated Statement of Net Assets at Fair value as at 31 March 2022 and notes to the Consolidated Financial Statements including a Summary of Significant Accounting Policies and Other Explanatory Information (hereinafter referred to as "the Consolidated Financial Statements").

In our opinion and to the best of our information and according to the explanations given to us and based on the consideration of reports of other auditors on separate financial statements and on the other financial information of the subsidiaries, the aforesaid consolidated financial statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI lnvlT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards prescribed under Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015 ("Ind AS"), as amended and other accounting principles generally accepted in India, of the consolidated State of Affairs of the Group as at 31 March 2022, its consolidated Loss including other comprehensive income, its consolidated Cash Flows, consolidated changes in Unit Holders' Equity, the consolidated total Returns at fair value for the year ended 31 March 2022 and the consolidated Net Assets at fair value as at 31 March 2022.

BASIS FOR OPINION

We conducted our audit of the Consolidated Financial Statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the consolidated financial statements section of our report. We are independent of the Group in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Consolidated Financial Statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the Consolidated Financial Statements.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Consolidated Financial Statements of the current period. These matters were addressed in the context of our audit of the Consolidated Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
1. Loss on fair value measurement of other payable / deferred consideration payable to IRB Group. Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims. Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head 'Loss on fair value measurement of other payable'.	• We reviewed the Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs. • We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made. • We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein. • We also reviewed the reasonableness of the variables applied in the said computation. • Based on the above, the fair value of liability to the Sponsor, as estimated by the valuer, taking into consideration the weighted average of probabilities of realization has been validated.
2. Impairment Testing The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment. The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights.	• We evaluated management's assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management. • Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue. • Evaluated the potential changes in major components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were suitable. • Assessed the appropriateness of the weighted average cost of capital used in determining

PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
Accordingly, the evaluation of impairment of toll collection rights has been determined as a Key Audit Matter.	recoverable amount. • Performed sensitivity analysis of key assumptions used in valuation. • Tested the arithmetical accuracy of the model.
3. <u>Cost Overrun</u> We have been informed that, since April 2020, Due to pandemic situation, construction of certain projects have been affected and delayed, which has resulted into additional costs to projects in relation to machinery idling, labor expenses, material prices, restoration of damaged works etc. Considering above, SPVs have been charged with such additional costs. We were further informed that SPVs will raise claim with NHAI in this regard which shall, repay the costs immediately upon receipt of claims. Based on nature of transactions, the same are considered to be Key Audit Matter.	• We perused the legal opinion obtained in an earlier matter in case of one of the project SPVs, IRB WC, over similar issue to understand the tenability of the claims to be filed with the Authority. • We reviewed addendum to the Project Implementation Agreement. • We also referred to the invoices raised on the SPVs. • Tested the arithmetical accuracy of fair valuation of trade payables towards Cost Overrun.

INFORMATION OTHER THAN THE CONSOLIDATED FINANCIAL STATEMENTS AND AUDITOR'S REPORT THEREON

The Board of Directors of the Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Management Discussion and Analysis, Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations but, does not include the Consolidated Financial Statements and our report thereon.

Our opinion on the Consolidated Financial Statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Consolidated Financial Statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF THE BOARD OF DIRECTORS OF INVESTMENT MANAGER FOR THE CONSOLIDATED FINANCIAL STATEMENTS

The Board of Directors of Investment Manager is responsible for the preparation of these Consolidated Financial Statements that give a true and fair view of the consolidated financial position as at 31 March 2022, consolidated financial performance including other comprehensive income, consolidated cash flows and consolidated changes in unit holder's equity and the consolidated total returns at fair value for the year ended 31

March 2022, the consolidated net assets at fair value as at 31 March 2022 in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended and relevant rules issued thereunder read with read with the SEBI InvIT Regulations. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the SEBI InvIT Regulations for safeguarding of the assets of the Group and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the consolidated financial statements that give a true and fair view and are free from material misstatement, whether due to fraud and error.

In preparing the Consolidated Financial Statements, the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group are responsible for assessing the ability of the Group to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of the Investment Manager and the respective Board of Directors of the subsidiary companies included in the Group are also responsible for overseeing the financial reporting process.

AUDITOR'S RESPONSIBILITY FOR THE AUDIT OF THE CONSOLIDATED IND AS FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance whether the Consolidated Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also,

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors of the Investment Manager.

- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the Consolidated Financial Statements. We are responsible for the direction, supervision and performance of the audit of the Financial Statements of such entities included in the Consolidated Financial Statements.

Materiality is the magnitude of misstatements in the Consolidated Financial Statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the Financial Statements.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Consolidated Financial Statements of the current period and are therefore the Key Audit Matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

OTHER MATTERS

We did not audit the Financial Statements of 4 subsidiaries, whose Financial Statements reflect Total Assets of Rs. 1,01,778.62 million and Net Assets of Rs. 34261.74 million as at 31 March 2022, Total Revenues of Rs. 4,936.64 million, Losses after taxes of Rs. 3944.85 million and Net Cash Outflows amounting to Rs. 25.66 million for the year ended on 31 March 2022, as considered in the Consolidated Financial Statements. These Financial Statements have been audited by other auditor whose reports have been furnished to us by the Investment Manager and our opinion on the Consolidated Financial Statements, in so far as it relates to the amounts and disclosures included in respect of these subsidiaries, is based solely on the reports of the other auditor.

Our opinion above, on the Consolidated Financial Statements, and our report on other legal and regulatory requirements below, are not modified in respect of the above matters with respect to our reliance on the work done by and the reports of the other auditor.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Based on our audit and as required by SEBI InvIT Regulations, we report that**:**

a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit of the aforesaid Consolidated Financial Statements.

b. In our opinion, proper books of account as required by law relating to preparation of the aforesaid Consolidated Financial Statements have been kept by the Trust so far as it appears from our examination of those books and the reports of the other auditors.

c. The consolidated Balance Sheet, the consolidated Statement of Profit and Loss, the consolidated Statement of Cash Flows, the consolidated Statement of Changes in Unit Holders' Equity, the consolidated Statement of Net Assets at fair value and the consolidated Statement of Total Returns at fair value are in agreement with the books of account.

d. In our opinion, the aforesaid financial statements comply with the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For Gokhale & Sathe,
Chartered Accountants
Firm Registration No.: 103264W

SD/-
CA Kaustubh Deshpande,
Partner
Membership No. 121011
UDIN: 22121011AJBCRQ6176
Date: 06th May 2022
Place: Mumbai

IRB Infrastructure Trust

Consolidated Balance sheet as at March 31, 2022

(Amount in Millions.)

	Notes	As at March 31, 2022	As at March 31, 2021
ASSETS			
Non-current assets			
Property, Plant and Equipment	4	8.85	10.59
Goodwill		604.54	604.54
Other Intangible assets	4	2,21,859.48	2,11,717.65
Intangible assets under development	4	1,290.89	4,684.26
Financial assets			
i) Others	7	2.74	3.28
Other non-current assets	9	656.55	0.14
Deferred tax assets (net)	8	287.67	-
		2,24,710.72	**2,17,020.47**
Current assets			
Financial assets			
i) Investments	5	659.54	572.50
ii) Trade receivables	6	51.55	100.24
iii) Cash and cash equivalents	10	287.23	413.49
iv) Bank balance other than (iii) above	11	2,469.97	1,744.35
v) Others	7	1,604.18	635.99
Current tax assets (net)	12	114.22	147.11
Other current assets	13	1,677.46	2,166.40
		6,864.15	**5,780.08**
Total assets		**2,31,574.87**	**2,22,800.55**
EQUITY AND LIABILITIES			
Equity			
Equity share capital	14	85,504.33	81,688.00
Other equity	15		
Other reserves		(8,108.29)	(3,669.05)
Total Equity		**77,396.04**	**78,018.95**
Non-controlling interests			
		77,396.04	**78,018.95**
Non-current liabilities			
Financial liabilities			
i) Borrowings	16	92,559.82	89,161.31
ii) Other financial liabilities	18	35,168.79	24,720.81
iii) Trade payables	19	5,998.85	2,463.41
Provisions	20	1,350.57	357.84
Deferred tax liabilities (net)	8	-	424.33
		1,35,078.03	**1,17,127.70**
Current liabilities			
Financial liabilities			
i) Borrowings	16	4,719.18	4,784.87
ii) Trade payables	17		
a) total outstanding dues of micro enterprises and small enterprises		3.69	13.18
b) total outstanding dues of creditors other than micro enterprises and small enterprises		11,214.65	2,547.07
iii) Other financial liabilities	18	3,023.13	20,198.86
Other current liabilities	21	140.15	109.78
Current tax liabilities (net)		-	0.14
		19,100.80	**27,653.90**
Total liabilities		**1,54,178.83**	**1,44,781.60**
Total equity and liabilities		**2,31,574.87**	**2,22,800.55**

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes) are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 06/05/2022

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

IRB Infrastructure Trust

Consolidated Statement of Profit and Loss for the year ended March 31, 2022

(Amount in Millions.)

Particulars	Notes	For the year ended March 31, 2022	For the year ended March 31, 2021
Income			
Revenue from operations	22	12,404.84	10,361.51
Other income	23	100.13	112.71
Total income		**12,504.97**	**10,474.22**
Expenses			
Road work and site expenses	24	3,989.80	3,983.41
Depreciation and amortisation expenses	25	1,674.90	1,255.69
Finance costs	26	9,538.70	8,228.17
Investment Manager Fees		42.48	46.25
Other expenses	27	2,406.43	138.32
Total expenses		**17,652.31**	**13,651.84**
Profit/(loss) before tax		**(5,147.34)**	**(3,177.62)**
Tax expenses			
Current tax		8.87	46.20
Deferred tax		(720.23)	369.63
MAT Credit utilisation / (Entitlement)		-	(340.97)
Total tax expenses		**(711.36)**	**74.86**
Profit/(loss) after tax		**(4,435.98)**	**(3,252.48)**
Other comprehensive income			
Item that will not be reclassified to profit or loss:			
(a) Re-measurement (loss)/gain on defined benefit plans (net of taxes)		-	-
Other comprehensive income/ (loss) for the year, net of tax		-	-
Total comprehensive income /(loss) for the year		**(4,435.98)**	**(3,252.48)**
Profit/(loss) after tax		**(4,435.98)**	**(3,252.48)**
Attributable to:			
Owners of the Project SPV Group		(4,435.98)	(3,252.48)
Non-controlling interests			-
Total comprehensive income for the year			
Attributable to:			
Equity holders of the Project SPV Group		(4,435.98)	(3,252.48)
Non-controlling interests		-	-
Earnings per unit (of Rs 100 each)			
Basic		(5.26)	(4.14)
Diluted		(5.26)	(4.14)

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes) are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 06/05/2022

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Consolidated statement of net assets at fair value

(Rs. in Millions)

	As at March 31, 2022		As at March 31, 2021	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	2,31,574.87	2,52,287.18	2,22,800.55	2,45,589.09
B. Liabilities (at book value)	1,54,178.83	1,52,169.83	1,42,318.19	1,31,113.67
C. Net Assets (A-B)	77,396.04	1,00,117.36	80,482.36	1,14,475.43
D. Number of units (in millions)	855.04	855.04	816.88	816.88
E. NAV (C/D) (Amount in Rs.)	**90.52**	**117.09**	**98.52**	**140.14**

Project wise break up of fair value of total assets:

Name of the project	**As at March 31, 2022**
IRB Westcoast Tollway Limited (IRBWTL)	29,419.81
Solapur Yedeshi Tollway Limited (SYTL)	19,669.34
Yedeshi Aurangabad Tollway Limited (YATL)	35,731.21
Kaithal Tollway Limited (KTL)	28,036.76
AE Tollway Limited (AETL)	29,936.78
Udaipur Tollway Limited (UTL)	27,731.21
CG Tollway Limited (CGTL)	25,806.63
Kishangarh Gulabpura Tollway Limited (KGTL)	19,940.03
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	35,707.46
Subtotal	**2,51,979.23**
Add : IRB Infrastructure Trust Assets	**307.96**
Total assets	**2,52,287.18**

B. Consolidated statement of total returns at fair value :

Particulars	**For the year ended March 31, 2022**	**For the year ended March 31, 2021**
Total Comprehensive Income (As per the Statement of Profit and Loss)	(4,435.98)	(3,252.48)
Add/Less: other changes in fair value (e.g., in investment property, property, plant & equipment (if cost model is followed)) not recognized in total comprehensive income	22,721.31	33,993.07
Total Return	**18,285.33**	**30,740.59**

Notes :
Fair value of assets as at March 31, 2022 and March 31, 2021 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 06/05/2022

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D.Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

IRB Infrastructure Trust
Consolidated Statement of Cash Flows for the year ended March 31, 2022

(Amount in Millions.)

Particulars	For the year ended March 31, 2022	For the year ended March 31, 2021
Cash flow from operating activities		
Profit/(loss) before tax	(5,147.34)	(3,177.62)
Adjustment to reconcile profit before tax to net cash flows:		
Depreciation and amortisation	1,674.90	1,255.69
Resurfacing expenses	992.73	292.88
Fair value gain on mutual funds	(0.78)	(1.43)
Net (gain) on sale of current Investment	(13.93)	(13.08)
Finance costs	9,538.70	8,228.17
Interest income	(81.69)	(82.04)
Other non operative income	(3.73)	(13.28)
Gain/(loss) on fair value measurement of other payable	2,161.31	(2.86)
Operating profit before working capital changes	**9,120.17**	**6,486.41**
Movement in working capital:		
Increase/ (decrease) in trade payables	12,193.54	2,277.55
Increase/ (decrease) in other financial liabilities	306.46	(2,516.37)
(Decrease)/ increase in other liabilities	30.37	(52.75)
Decrease / (increase) in trade receivables	48.69	251.88
(Decrease) in loans	-	(4.53)
(Increase) / decrease in other financial assets	(989.59)	(213.15)
(Increase) / decrease in other assets	(167.46)	1,232.51
Cash generated from operations	**20,542.18**	**7,461.55**
Taxes paid (net)	32.09	14.70
Net cash flows generated from operating activities (A)	**20,574.27**	**7,476.25**
Cash flows from investing activities		
Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development and capital advances	(17,617.12)	(18,933.90)
Proceeds from sale/ (purchase) of current investments (net)	(72.33)	(557.99)
Investments in bank deposits (having original maturity of more than three months) (net)	(725.62)	(167.95)
Interest received	107.36	75.08
Net cash flows (used in) investing activities (B)	**(18,307.71)**	**(19,584.76)**
Cash flows from financing activities		
Proceeds from non-current borrowings	4,066.31	9,204.86
Repayment of non-current borrowings	(775.43)	(39.62)
Proceed of current borrowings	4759.00	4,155.57
Repayment of current borrowings	(4828.83)	-
Issue of equity share capital	3,816.33	5,105.50
Unit issue expenses	(3.26)	(103.82)
Finance cost paid	(9,426.95)	(5,990.16)
Net cash flows (used in)/generated from financing activities (C)	**(2,392.82)**	**12,332.32**
Net increase / (decrease) in cash and cash equivalents (A+B+C)	**(126.26)**	**223.81**
Cash and cash equivalents at the beginning of the year	413.49	189.70
Cash and cash equivalents at the end of the year (refer note 10)	**287.23**	**413.49**
Components of cash and cash equivalents		
Balances with scheduled banks:		
- Trust, retention and other escrow accounts	161.56	113.94
- Others	118.03	288.60
- In deposit accounts with original maturity less than 3 months	-	-
Cash on hand	7.64	10.96
Total cash and cash equivalents	**287.23**	**413.49**

IRB Infrastructure Trust
Consolidated Statement of Cash Flows for the year ended March 31, 2022

(Amount in Millions.)

Particulars	For the year ended March 31, 2022	For the year ended March 31, 2021
Debt reconciliation statement in accordance with Ind AS 7		
Opening balances		
Long term borrowing	90,833.34	78,815.63
Short term borrowing	4,155.57	-
Movements		
Cash Flows		
Long term borrowing	3,290.88	9,165.24
Short term borrowing	(69.83)	4,155.57
Non-cash changes		
Long term borrowing	-	2,852.47
Short term borrowing	-	-
Closing balances		
Long term borrowing	94,124.22	90,833.34
Short term borrowing	4,085.74	4,155.57

Notes :

1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.

3. The Consolidated cash flow statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows".

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes)are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

Place: Mumbai
Date: 06/05/2022

Statement of changes in equity
A. Unit capital:

(Amount in Millions.)

	March 31, 2022		March 31, 2021	
i) Units issued, subscribed and fully paid	**No.**	**Rs.**	**No.**	**Rs.**
Units having face value of Rs. 100/-				
Balance at the beginning of the year	81,68,80,000	81,688.00	76,58,25,000	76,582.50
Issue of Unit capital (Note 14)	3,81,63,265	3,816.33	5,10,55,000	5,105.50
Balance at the end of the year	**85,50,43,265**	**85,504.33**	**81,68,80,000**	**81,688.00**

B. Other equity

(Amount in Millions.)

	March 31, 2022	**March 31, 2021**
Retained earnings		
Balance at the beginning of the year	(3,669.05)	(312.75)
Profit/(loss) for the year	(4,435.98)	(3,252.48)
Pre-incorporation profit		
Unit Issue expenses	(3.26)	(103.82)
Balance at the end of the year	**(8,108.29)**	**(3,669.05)**

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes)are an integral part of Consolidated Financial Statements.

As per our report of even date attached

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
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Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

Place: Mumbai
Date: 06/05/2022

1 Corporate Information

The IRB Infrastructure Trust (the "Fund" / "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under the Registration Act, 1908 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Fund is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Fund is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Fund is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registraion certificate from SEBI on November 25, 2019.

The Fund has been formed to invest in infrastructure assets primarily being in the road sector in India. The Fund's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Fund's portfolio comprises of nine road projects as listed below:-

Project SPV Name**	Residual Concession life*	Proposed shareholding	Nature of Investment	Status	Principal Activities	Country of incorporation
IRB Westcoast Tollway Limited (IRBWTL)	19 years 11 Months 2 days	100%	Subsidiary	Tolling and Construction	Construction and operation of road including toll collection.	India
Solapur Yedeshi Tollway Limited (SYTL)	21 years 9 Months 21 days	100%	Subsidiary	Operating		India
Yedeshi Aurangabad Tollway Limited (YATL)	19 years 3 Months 1 days	100%	Subsidiary	Operating		India
Kaithal Tollway Limited (KTL)	20 years 3 Months 14 days	100%	Subsidiary	Operating		India
AE Tollway Limited (AETL)	18 years 4 Months 2 days	100%	Subsidiary	Operating		India
Udaipur Tollway Limited (UTL)	16 years 5 Months 3 days	100%	Subsidiary	Operating		India
CG Tollway Limited (CGTL)	15 years 7 Months 5 days	100%	Subsidiary	Operating		India
Kishangarh Gulabpura Tollway Limited (KGTL)	15 years 10 Months 22 days	100%	Subsidiary	Tolling and Construction		India
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	19 years 1 Months 25 days	100%	Subsidiary			India

* Represents residual concession life as at March 31, 2022 as per original concession period (without considering extension of concession period, if any).

** Of the above Project SPVs, IRBWTL, SYTL, YATL, AETL, CGTL, UTL and IRBHMTL have been converted to public companies on November 13, 2019 and KTLand KGTL on November 14, 2019 .

2 Basis of preparation

A. Statement of compliance

The Consolidated Financial Statements of Project SPV Group comprises of Consolidated Balance Sheet as at March 31 2022 and 31 March 2021 , the Consolidated Statement of Profit and Loss (including Other Comprehensive Income) of the Project SPV group, the Consolidated Statement of Cash Flow Statement, the Consolidated Statement of Changes in Equity of the movement of the unit holders for the year ended March 31 2022 and March 31, 2021 , the consolidated statement of net assets at fair value as at March 31 2022 and March 31, 2021 and the consolidated statement of total returns at fair value for the year ended March 31, 2022 and March 31, 2021, a summary of significant accounting policies, notes and other explanatory Information.

The Consolidated Financial Statements of the Project SPV Group have been prepared in accordance with Indian Accounting Standards (Ind AS) as per the Companies (Indian Accounting Standards) Rules, 2015 notified under Section 133 of the Act, read with other relevant provisions of the Act.The ConsolidatedFinancial Statements have been prepared on a historical cost basis, except for certain assets and liabilities which have been measured at fair value.

The Consolidated Financial Statements are presented in Rs. in millions, except when otherwise indicated.Wherever the amount represented '0' (zero) construes value less than Rupees five thousand.

B Basis of preparation of Consolidated Financial Statements

The Consolidated Financial Statements comprise the financial statements of the Project SPV Group.

Consolidated Financial Statements are prepared using uniform accounting policies for like transactions and other events in similar circumstances.

The financial statements of all Project SPVs used for the purpose of consolidation are drawn up to the same reporting date i.e. year ended on March 31.

Consolidation procedure:

(a) Consolidate like items of assets, liabilities, equity, income, expenses and cash flows of Project SPVs.

(b) Eliminate in full intra Project SPVs assets and liabilities, income, expenses and cash flows relating to transactions between Project SPVs of the Project SPV Group (profits or losses resulting from intra Project SPV Group transactions that are recognised in assets, such as inventory and property, plant and equipment, are eliminated in full). Profit or loss and each component of other comprehensive income (OCI) are attributed to the equity holders of the Project SPV Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance.

3 Summary of significant accounting policies

3.01 Current versus non-current classification

The Project SPV Group has identified twelve months as its operating cycle. The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents.

The Project SPV Group presents assets and liabilities in the balance sheet based on current/ non-current classification. An asset is treated as current when it is:

- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:

- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Project SPV Group classifies all other liabilities as non-current.
Deferred tax assets and liabilities are classified as non-current assets and liabilities respectively.

3.02 **Use of estimates and judgements**

The preparation of the Project SPV Group's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future years.

Estimates and assumptions

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the year in which the estimates are revised and future periods are affected.

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below. The Project SPV Group based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

Fair value measurement of financial instruments (refer note 31)
Provision for major maintenance (refer note 20)
Impairment of non financial assets (refer note 3.17)

3.03 **Fair value measurement**

The Project SPV Group measures financial instruments, (refer note 31) at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the Project SPV Group.
The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Project SPV Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1 - Quoted (unadjusted) market prices in active markets for identical assets or liabilities
Level 2- Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
Level 3 -Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable
For assets and liabilities that are recognised in the financial statements on a recurring basis, the Project SPV Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Project SPV Group's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Project SPV Group's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management presents the valuation results to the Investment Manager and the Project SPV Group's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Project SPV Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.
Disclosures for valuation methods, significant estimates and assumptions (note 3.02)
Financial instruments (including those carried at amortised cost) (note 5,6,7,8,11,17,18,19,31)
Quantative disclosure of fair value measurement hierarchy (note 32)

3.04 **Revenue recognition**

The Project SPV Group has applied the following accounting policy for revenue recognition:

Revenue from contracts with customers:

The Project SPV Group recognises revenue from contracts with customers based on a five step model as set out in Ind AS 115:
Step 1. Identify the contract(s) with a customer: A contract is defined as an agreement between two or more parties that creates enforceable rights and obligations and sets out the criteria for every contract that must be met.

Step 2. Identify the performance obligations in the contract: A performance obligation is a promise in a contract with a customer to transfer a good or service to the customer.

Step 3. Determine the transaction price: The transaction price is the amount of consideration to which the Company expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties.

Step 4. Allocate the transaction price to the performance obligations in the contract: For a contract that has more than one performance obligation, the Company will allocate the transaction price to each performance obligation in an amount that depicts the amount of consideration to which the Company expects to be entitled in exchange for satisfying each performance obligation.

Step 5. Recognise revenue when (or as) the entity satisfies a performance obligation.

The Project SPV Group satisfies a performance obligation and recognises revenue over time, if one of the following criteria is met:
1. The customer simultaneously receives and consumes the benefits provided by the Project SPV Group's performance as the Project SPV Group performs; or
2. The Project SPV Group's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or
3. The Project SPV Group's performance does not create an asset with an alternative use to the Project SPV Group and the entity has an enforceable right to payment for performance completed to date.

Contract revenue

Contract revenue associated with the utility shifting incidental to construction of road are recognized as revenue by reference to the stage of completion of the projects at the balance sheet date. The stage of completion of project is determined by the proportion that contract cost incurred for work performed up to the balance sheet date bears to the estimated total contract costs. Project SPVs operations involve levying of GST on the construction work. Goods and Service tax is not received by the project SPVs on its own account, rather, it is tax collected on value added to the commodity by the seller on behalf of the government. Accordingly, it is excluded from revenue.

Income from the concession arrangements earned under the intangible asset model consists of the (i) fair value of contract revenue, which is deemed to be fair value of consideration transferred to acquire the asset; and (ii) payments actually received from the users. The intangible asset is amortised over its expected useful life in a way that reflects the pattern in which the asset's economic benefits are consumed by the Project SPV Group, starting from the date when the right to operate starts to be used. Based on these principles, the intangible asset is amortised in line with the actual usage of the specific public utility facility, with a maximum of the duration of the concession.

Income from toll contracts

The income from Toll Contracts on BOT basis are recognised on actual collection of toll revenue (net of Premium and revenue share payable to NHAI) as per Concession Agreement. Revenue from electronic toll collection is recognised on accrual basis.

Interest income

For all financial assets measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortised cost of a financial liability. When calculating the effective interest rate, the Project SPV Group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in finance income in the statement of profit and loss.

Dividends

Revenue is recognised when the Project SPV Group's right to receive the payment is established, which is generally when shareholders approve the dividend.

Trade receivables

A receivable represents the Project SPV Group's right to an amount of consideration that is unconditional i.e. only the passage of time is required before payment of consideration is due.

3.05 **Government Grants**

Grants and subsidies from the government are recognised if the following conditions are satisfied.

There is reasonable assurance that the Project SPV Group will comply with the conditions attached to it.
Such benefits are earned and reasonable certainty exists of the collection.
Government grants are recognised in accordance with the terms of the respective grant on accrual basis considering the status of compliance of prescribed conditions and ascertainment that the grant will be received.

Grant received are considered as a part of the total outlay of the construction project and accordingly, the same is reduced from the gross value of assets.

3.06 **Taxes**

Current income tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities in accordance the Income Tax Act, 1961. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the country where the Company operates and generates taxable income.

Current income tax relating to items recognised outside profit or loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.
- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction. affects neither the accounting profit nor taxable profit or loss.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity). Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity .

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, are recognised subsequently if new information about facts and circumstances change. Acquired deferred tax benefits recognised within the measurement period reduce goodwill related to that acquisition if they result from new information obtained about facts and circumstances existing at the acquisition date. If the carrying amount of goodwill is zero, any remaining deferred tax benefits are recognised in OCI/ capital reserve depending on the principle explained for bargain purchase gains. All other acquired tax benefits realised are recognised in the consolidated statement of profit and loss. Deferred tax is recognised in consolidated statement of profit and loss on the consolidated adjustments.

Minimum Alternate Tax (MAT)

Minimum Alternate Tax (MAT) paid as per Indian Income Tax Act, 1961 is in the nature of unused tax credit which can be carried forward and utilised when the Project SPV Group will pay normal income tax during the specified period. Being DTA tax credit is recognised to the extent that it is probable that the unused tax credit can be utilised in the specified future period. The net amount of tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the balance sheet.

3.07 **Property, plant and equipment**

Property, plant and equipment are stated at cost, less accumulated depreciation and impairment losses if any. Cost comprises the purchase price and any attributable cost of bringing the asset to its working condition for its intended use.Any trade discount or rebates are deducted in arriving at the purchase price.

Depreciation is calculated on written down value method (WDV) using the useful lives as prescribed under the Schedule II to the Companies Act, 2013 or re-assessed by the Project SPV Group based on technical evaluation. The Project SPV Group has estimated the following useful lives for its tangible fixed assets:

Asset class	Useful life
Building	30 years*
Office equipment	5 years
Computers	3 years
Furniture & fixtures	10 years

* The useful life of building has been calculated by management as per their technical estimate.

3.08 **Intangible assets**

The Project SPV Group exercised first time adoption under Ind AS 101 and has elected to continue with the carrying value of its “Toll Collection Rights” (Intangible Assets) including corresponding obligation, as recognised in the financial statements as at the date of transition April 1, 2016 measured as per the Previous GAAP and uses that as its deemed cost as at date of transition.

Toll collection rights are stated at cost, less accumulated amortisation , impairment losses and grant from government. Cost includes:
a) For acquired Toll Collection Rights - Upfront payments towards acquisition and incidental expenses related thereto.
b) Toll Collection Rights awarded by the grantor against construction service rendered by the Project SPV Group on BOT / DBFOT basis - Direct and indirect expenses on construction of roads, bridges, culverts, infrastructure and other assets at the toll plazas.

c) Toll Collection Rights in lieu of premium - Undiscounted premium obligation over the concession period.

Amortisation

Toll Collection Rights are amortised over the period of concession, using revenue based amortisation as prescribed in Ind As-36. Under this method, the carrying value of the rights is amortised in the proportion of actual toll revenue for the year to projected revenue for the balance toll period, to reflect the pattern in which the assets economic benefits will be consumed. At each balance sheet date, the projected revenue for the balance toll period is reviewed by the management. If there is any change in the projected revenue from previous estimates, the amortisation of toll collection rights is changed prospectively to reflect any changes in the estimates.

Intangible assets under development

Expenditure related to and incurred during implementation of project are included under “Intangible Assets under Development”. The same will be transferred to the respective intangible assets on completion of project.

3.09 **Borrowing costs**

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences between the foreign currency borrowing and the functional currency borrowing to the extent regarded as an adjustment to the borrowing costs.

3.10 **Leases**

The determination of whether an arrangement is (or contains) a lease is based on the substance of the arrangement at the inception of the lease. The arrangement is, or contains, a lease if fulfilment of the arrangement is dependent on the use of a specific asset or assets and the arrangement conveys a right to use the asset or assets, even if that right is not explicitly specified in an arrangement.

Project SPV Group as a lessee

A leased asset is depreciated over the useful life of the asset. However, if there is no reasonable certainty that the Project SPV Group will obtain ownership by the end of the lease term, the asset is depreciated over the shorter of the estimated useful life of the asset and the lease term.

A lease is classified at the inception date as a finance lease or an operating lease. A lease that transfers substantially all the risks and rewards incidental to ownership to the Project SPV Group is classified as a finance lease.

Operating lease payments are recognised as an expense in the consolidated statement of profit and loss on a straight-line basis over the lease term.

Ind AS 116 - Leases

Ind AS 116, Leases, it sets out principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases, except short-term leases and leases for low-value items, under a single on-balance sheet lease accounting model. A lessee recognises a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. Lessor accounting largely unchanged from the existing standard – i.e. lessors continue to classify leases as finance or operating leases.

Based on the preliminary assessment, the Company does not expect any significant impacts on transition to Ind AS 116. This assessment is based on currently available information and may be subject to changes arising from further reasonable and supportable information when the standard will be adopted.

Project SPV Group as a lessor

Leases in which the Project SPV Group does not transfer substantially all the risks and rewards of ownership of an asset are classified as operating leases. Rental income from operating lease is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income.Contingent rents are recognised as revenue in the period in which they are earned.

Leases are classified as finance leases when substantially all of the risks and rewards of ownership transfer from the Project SPV Group to the lessee. Amounts due from lessees under finance leases are recorded as receivables at the Project SPV Group’s net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the net investment outstanding in respect of the lease.

3.11 **Provisions**

Provisions are recognised when the Project SPV Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Project SPV Group expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of profit and loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimates.

3.12 **Resurfacing expenses**

As per the Concession Agreements, the Project SPV Group is obligated to carry out resurfacing of the roads under concession. Provision for the planned expenditure is made for the period upto end of the period for which periodic maintenance is required, out of the total entitiled period.The same is stated in the consolidated statement of profit and loss in accordance with Ind AS 37 "Provisions, Contingent Liabilities and Contingent Assets."

3.13 **Contingent liability and Contingent assets**

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Project SPV Group or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Project SPV Group does not recognise a contingent liability but discloses its existence in the financial statements.

A contingent assets is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.

Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.14 **Financial instruments**

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement

All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through statement of profit and loss, transaction costs that are attributable to the acquisition of the financial asset.

On initial recognistion, a financial asset is classified as measured of
- amortised cost
- FVOCI - Debt instruments
- FVOCI - equity instruments
- FVTPL

Financial assets are not reclassified subsequent to their initial recognition, except if and in the year, the Project SPV Group changes its business model for managing financial assets.

Debt instruments at amortised cost

A ‘debt instrument’ is measured at the amortised cost if both the following conditions are met:
- The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
- Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance income in the statement of profit and loss. The losses arising from impairment are recognised in the statement of profit and loss.

Debt instrument at FVTOCI

A ‘debt instrument’ is classified as at the FVTOCI if both of the following criteria are met:
- The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and
- The asset’s contractual cash flows represent SPPI.

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the other comprehensive income (OCI). However, the Project SPV Group recognizes interest income, impairment losses and reversals and foreign exchange gain or loss in the statement of profit and loss. On derecognition of the asset, cumulative gain or loss previously recognised in OCI is reclassified from the equity to Statement of profit and loss.Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as at FVTOCI, is classified as at FVTPL.

In addition, the Project SPV Group may elect to designate a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as ‘accounting mismatch’). The Project SPV Group has designated certain debt instrument as at FVTPL.

Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Equity investments

All equity investments in scope of Ind AS 109 are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Project SPV Group may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value. The Project SPV Group makes such election on an instrument-byinstrument basis. The classification is made on initial recognition and is irrevocable.

If the Project SPV Group decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to P&L, even on sale of investment. However, the Project SPV Group may transfer the cumulative gain or loss within equity.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a Project SPV Group of similar financial assets) is primarily derecognised (i.e. removed from the Project SPV Group’s consolidated balance sheet) when:

- The rights to receive cash flows from the asset has expired, or
- The Project SPV Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a ‘pass-through’ arrangement; and either (a) the Project SPV Group has transferred substantially all the risks and rewards of the asset, or (b) the Project SPV Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Project SPV Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Project SPV Group continues to recognise the transferred asset to the extent of the Project SPV Group’s continuing involvement. In that case, the Project SPV Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Project SPV Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Project SPV Group could be required to repay.

Impairment of financial assets

In accordance with Ind AS 109, the Project SPV Group applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

-Financial assets that are debt instruments, and are measured at amortised cost e.g., loans, debt securities, deposits, trade receivables and bank balance
-Financial assets that are debt instruments and are measured as at FVTOCI
-Lease receivables under Ind AS 17
-Trade receivables or any contractual right to receive cash or another financial asset that result from transactions that are within the scope of Ind AS 18 (referred to as contractual revenue receivables' in these financial statements)

-Loan commitments which are not measured as at FVTPL
-Financial guarantee contracts which are not measured as at FVTPL
The Project SPV Group follows 'simplified approach' for recognition of impairment loss allowance on:
-Trade receivables; and
-Other receivables
The application of simplified approach does not require the Project SPV Group to track changes in credit risk. Rather, it recognises impairment loss allowance based on lifetime ECLs at each reporting date, right from its initial recognition.

For recognition of impairment loss on other financial assets and risk exposure, the Project SPV Group determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the entity reverts to recognising impairment loss allowance based on 12-month ECL.

Lifetime ECL are the expected credit losses resulting from all possible default events over the expected life of a financial instrument. The 12-month ECL is a portion of the lifetime ECL which results from default events that are possible within 12 months after the reporting date.

ECL is the difference between all contractual cash flows that are due to the Project SPV Group in accordance with the contract and all the cash flows that the entity expects to receive (i.e., all cash shortfalls), discounted at the original EIR. When estimating the cash flows, an entity is required to consider:

-All contractual terms of the financial instrument (including prepayment, extension, call and similar options) over the expected life of the financial instrument. However, in rare cases when the expected life of the financial instrument cannot be estimated reliably, then the entity is required to use the remaining contractual term of the financial instrument. -

-Cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms
-Financial assets measured as at amortised cost, contractual revenue receivables and lease receivables: ECL is presented as an allowance, i.e., as an integral part of the measurement of those assets in the balance sheet. The allowance reduces the net carrying amount. Until the asset meets write-off criteria, the Project SPV Group does not reduce impairment allowance from the gross carrying amount.

Financial liabilities
Initial recognition and measurement
Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through Statement of profit and loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.
The Project SPV Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts and derivative financial instruments.

Subsequent measurement
The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through Statement of profit and loss
Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through statement of profit and loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Project SPV Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the consolidated statement of profit and loss.

Loans and borrowings
This is the category most relevant to the Project SPV Group. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in statement of profit and loss when the liabilities are derecognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

This category generally applies to borrowings. For more information refer note 16.

Derecognition
A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the consolidated statement of profit and loss.

Offsetting of financial instruments
Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.15 **Cash and cash equivalents**
Cash and cash equivalent in the balance sheet comprises of cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, as they are considered an integral part of the Project SPV Group's cash management.

3.16 **Cash dividend to equity holders of the Project SPV Group**
The Project SPV Group recognises a liability to make cash or non-cash distributions to equity holders of the parent when the distribution is authorised and the distribution is no longer at the discretion of the Project SPV Group. As per the corporate laws in India, a distribution is authorised when it is approved by the shareholders. A corresponding amount is recognised directly in equity.

3.17 **Impairment of non-financial assets**
The Project SPV Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Project SPV Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset. unless the asset does not generate cash inflows that are largely independent of those from other assets or Project SPV Group's of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

The Project SPV Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Project SPV Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to project future cash flows after the fifth year. To estimate cash flow projections beyond periods covered by the most recent budgets/forecasts, the Project SPV Group extrapolates cash flow projections in the budget using a steady or declining growth rate for subsequent years, unless an increasing rate can be justified. In any case, this growth rate does not exceed the long-term average growth rate for the products, industries, or country or countries in which the entity operates, or for the market in which the asset is used.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognised impairment losses no longer exist or have decreased. If such indication exists, the Project SPV Group estimates the asset's or CGU's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the statement of profit and loss.

Goodwill is tested for impairment annually as at 31 March and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or Project SPV Group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying amount, an impairment loss is recognised. Impairment losses relating to goodwill cannot be reversed in future periods.

Intangible assets with indefinite useful lives are tested for impairment annually as at 31 March at the CGU level, as appropriate, and when circumstances indicate that the carrying value may be impaired.

3.18 **Segment information**

Based on "Management Approach" as defined in Ind AS 108 - Operating Segments, the Management ("the Board of Directors") evaluates the Project SPV Group's performance and allocates the resources based on an analysis of various performance indicators by business segments. Inter segment sales and transfers are reflected at market prices.

Unallocable items includes general corporate income and expense items which are not allocated to any business segment.

Segment policies:

Based on "Management Approach" as defined in Ind AS 108 -Operating Segments, the Management evaluates the Project SPV Group's performance and allocates the resources based on an analysis of various performance indicators by business segments. Inter segment sales and transfers are reflected at market prices.

Unallocable items includes general corporate income and expense items which are not allocated to any business segment.

The Project SPV Group prepares its segment information in conformity with the accounting policies adopted for preparing and presenting the financial statements of the Project SPV Group as a whole. Common allocable costs are allocated to each segment on an appropriate basis.

3.19 **Earnings per unit**

Basic earnings per unit are calculated by dividing the net profit or loss for the period attributable to unitholders by the weighted average number of units outstanding during the period. For the purpose of calculating diluted earnings per unit, the net profit or loss for the period attributable to unitholders and the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

Note 4 : Property, Plant and Equipment and Capital work in progress

(Amount in Millions.)

	Premises	Computer	Office Equipments	Furniture and Fixture	Total
Cost or deemed cost					
At 31 March 2021	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Additions					-
Disposals/ Adjustments					-
At 31 March 2022	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Depreciation					
At 31 March 2021	**5.79**	**0.28**	**1.18**	**0.34**	**7.59**
Additions	1.61	0.00	0.09	0.04	1.74
Disposals/ Adjustments	-	-	-	-	-
At 31 March 2022	**7.40**	**0.29**	**1.28**	**0.38**	**9.33**
Net Book value					
At 31 March 2022	**8.69**	**0.02**	**0.12**	**0.02**	**8.85**
At 31 March 2021	**10.30**	**0.01**	**0.22**	**0.05**	**10.59**

Net Book value	March 31, 2022	March 31, 2021
Property, Plant and Equipment	8.85	10.59

Note 4 : Intangible Assets and Intangible Assets under development

Intangible Assets (Amount in Millions.)

Particulars	Toll Collection Rights	Total
Cost or deemed cost		
At 31 March 2021	**2,16,344.42**	**2,16,344.42**
Additions	11,814.99	11,814.99
Deletions		-
Adjustments	-	-
At 31 March 2022	**2,28,159.42**	**2,28,159.42**
Amortisation		
At 31 March 2021	**4,626.78**	**4,626.78**
Additions	1,673.16	1,673.16
Deletions	-	-
Adjustments	-	-
At 31 March 2022	**6,299.93**	**6,299.93**
Net Book value		
At 31 March 2022	2,21,859.48	
At 31 March 2021	2,11,717.65	

Particulars	March 31, 2022	March 31, 2021
Toll Collection Rights	2,21,859.48	2,11,717.65
Total	**2,21,859.48**	**2,11,717.65**

Intangible assets under development

Particulars	March 31, 2022	March 31, 2021
Toll Collection Rights		
At the beginning of the year	4,684.26	13,853.63
Add : development during the year	835.34	1,274.74
	5,519.60	15,128.37
Less : Transfer to Intangible Asset (Toll Collection Rights)	4,228.70	10,444.11
Closing balance	**1,290.89**	**4,684.26**
Total	**1,290.89**	**4,684.26**

Tangible and Intangible assets given as security

Tangible and Intangible assets are subject to first charge to secured long-term borrowings from the lenders.

(Amount in Millions.)

Particulars	March 31, 2022				March 31, 2021			
	Face Value Rs.	No of Units	Current	Non-current	Face Value Rs.	No of Units	Current	Non-current
Financial Assets								
Note 5 : Investment								
i) Investments in Mutual Funds (quoted)								
Fair Value Through Profit or Loss (FVTPL)								
IDBI Liquid Fund - Direct Plan - Growth	1,000	48,116.73	110.24		1,000	1,57,836.12	349.34	
ABSL Liquid Fund - Direct Plan - Growth	100	53,926.78	18.50	-	100	20,666.89	23.00	-
SBI Liquid Fund - Direct Growth	1,000	1,53,238.96	510.75	-	1,000	13,342.03	43.00	-
SBI Overnight Fund - Direct Growth	1,000	5,790.54	20.04		1,000	47,796.46	157.16	
			659.54	**-**			**572.50**	**-**
Total			**659.54**	**-**			**572.50**	**-**

Aggregate book value of quoted investments	**658.76**	**571.07**
Market value of quoted investments	**659.54**	**572.50**
Aggregate amount of unquoted investments	-	-
Aggregate amount of impairment in value of investments	-	-
Refer note 31 for determination of fair value of investments	-	-

(Amount in Millions.)

	March 31, 2022		March 31, 2021	
	Current	**Non-current**	**Current**	**Non-current**
Note 6 : Trade receivable				
(Unsecured, considered good)				
Related parties	0.51	-	-	-
Others	51.03	-	100.24	-
Total	**51.55**	**-**	**100.24**	**-**
Less: Allowances for expected credit loss/ bad and doubtful debt	-	-	-	-
Total	**51.55**	**-**	**100.24**	**-**

The Group has not identifed any credit impairment loss as at March 31, 2022 and March 31, 2021.

	March 31, 2022		March 31, 2021	
	Current	**Non-current**	**Current**	**Non-current**
Note 7 : Other financial assets				
(Unsecured, considered good)				
Interest accrued on fixed deposits	25.64	-	47.57	-
Interest receivable from banks	23.99	-	117.00	-
Retention money receivable	526.28	-	446.62	-
BG Margin receivable	-	-	-	0.54
Receivable from Government Authorities (NHAI)	965.24	-	1.44	-
Other receivable	56.15	-	16.47	-
Security and other deposits	6.89	2.74	6.89	2.74
Total	**1,604.18**	**2.74**	**635.99**	**3.28**

(Amount in Millions.)

	March 31, 2022	March 31, 2021
Note 8 : Deferred tax assets		
Deferred tax liabilities (net):		
Deferred tax liabilities:		
Difference in Depreciation and other differences in block of Property, Plant and equipment and Intangible assets as per tax books & financial books	1,350.50	2,636.80
Deferred tax assets:		
Effect of expenditure debited to profit and loss account in the current year but allowed for tax purposes in following years		
Deferred tax liabilities (net)	**1,350.50**	**2,636.80**
Deferred tax assets:		
Deferred tax assets:		
Depreciation	428.55	1,629.65
MAT credit entitlement	582.83	582.82
Expenses allowed for tax purposes on payment basis		
- Gratuity		
Deferred Tax assets on Fair valuation	626.79	
Deferred Tax Assets	**1,638.17**	**2,212.47**
Deferred Tax liabilities:		
Difference in Depreciation/ amortisation and other differences		
Tax losses	-	-
Deferred tax (assets) / liabilities	**(287.67)**	**424.33**

	March 31, 2022	March 31, 2021
Note 9 : Other non - current assets		
(Unsecured, considered good)		
Capital advances	-	0.14
Duties and taxes receivable	656.55	-
Total	**656.55**	**0.14**

(Amount in Millions.)

	March 31, 2022	March 31, 2021

IRB Infrastructure Trust
Notes to Consolidated Financial Statements for the year ended March 31, 2022

Note 10 : Cash and cash equivalents

	March 31, 2022	March 31, 2021
Cash and Bank balances		
Balances with banks:		
-on current accounts	118.03	288.60
-on trust, retention and other escrow accounts*	161.56	113.94
Deposits with banks		
-Original maturity less than 3 months	-	-
Cash on hand	7.64	10.96
Total	**287.23**	**413.49**

Note 11 : Bank balance other than cash and cash equivalent

	March 31, 2022	March 31, 2021
Maturity more than 3 months less than 12 months		
Other deposits	102.53	76.09
Debt service reserve account with banks /earmarked balance**	2,365.43	-
Maturity more than 12 months		
Debt service reserve account with banks /earmarked balance**	-	1,668.23
Other deposits	2.00	0.03
Total	**2,469.97**	**1,744.35**

Debt service reserve account/ major maintenance reserve account and trust, retention and other escrow accounts

Bank deposits are marked lien / pledged against the non current secured loan as per term loan agreement with the lender, further the lenders have first charge on trust, retention and other escrow accounts.

* First charge on above to the extent of amount payable as per the waterfall mechanism as defined in the Concession Agreement / Common Loan Agreement.

** The deposits to the extent of Rs. 2,365.43 millions (March 31, 2021 : Rs. 1,668.23 millions) maintained by the Project SPV Group with bank includes time deposits, which are held against Debt Service Reserve (DSR), are considered as current portion under the head “Other bank balances” since the same are encashable by the lenders in the event of default by the Project SPV Group, if any.

Current deposits are made for varying periods of between one day and three months, depending on the immediate cash requirements of the group and earn interest at the respective current deposit rates. Other time deposits earn interest at the rate of 3 % to 5.10% p.a.

Refer note 16 for details of security against term loans.

For the purpose of statement of cash flows, cash and cash equivalents comprise the following:

	March 31, 2022	March 31, 2021
Balance with banks:		
-on current accounts	118.03	288.60
-on trust, retention and other escrow accounts	161.56	113.94
Fixed deposits less than 3 months	-	-
Cash on hand	7.64	10.96
Total	**287.23**	**413.49**

Note 12 : Current tax assets (net)

	March 31, 2022	March 31, 2021
Advance income-tax (net of provision for tax)	114.22	147.11
Total	**114.22**	**147.11**

Note 13 : Other current assets

	March 31, 2022	March 31, 2021
(Unsecured, considered good unless otherwise stated)		
Advance with suppliers		
- Related parties (refer note 39)	502.89	1,014.28
- Others	32.22	22.05
Mobilisation advances (refer note 39)	435.80	610.61
Prepaid expenses	0.51	47.68
Duties and taxes receivable	706.04	471.78
Total	**1,677.46**	**2,166.40**

Note : 14 : Unit capital (Amount in Millions.)

	March 31, 2022		March 31, 2021	
Unit capital				
Authorised Unit capital				
Units having face value of Rs.100 each	85,50,43,265	85,504.33	81,68,80,000	81,688.00
	85,50,43,265	**85,504.33**	**81,68,80,000**	**81,688.00**
Issued Unit capital				
Units having face value of Rs.100 each	85,50,43,265	85,504.33	81,68,80,000	81,688
Total	**85,50,43,265**	**85,504.33**	**81,68,80,000**	**81,688**

Terms / rights attached to equity shares

The Project SPVs have only one class of equity shares having par value of Rs. 100/- per share Each holder of equity shares is entitled to one vote per share. The Project SPVs declares and pays dividend in Indian rupees.

In the event of liquidation of the Project SPV, the holders of equity shares will be entitled to receive remaining assets of the Project SPV, after distribution of all preferential amounts. The distribution will be in proportion to the number of equity shares held by the shareholders.

Reconciliation of the number of unit outstanding and the amount of Unit capital:

	March 31, 2022		March 31, 2021	
Units issued, subscribed and fully paid	**No. of units**	**Rs.**	**No. of units**	**Rs.**
Units having face value of Rs. 100/-				
At the beginning of the year	81,68,80,000	81,688.00	76,58,25,000	76,582.50
lssued during the year	3,81,63,265	3,816.33	5,10,55,000	5,105.50
At the end of the year	**85,50,43,265**	**85,504.33**	**81,68,80,000**	**81,688.00**

Details of unit holders holding more than 5% units:

	March 31, 2022		March 31, 2021	
	No. of units	**% of total unit capital**	**No. of units**	**% of total unit capital**
IRB Infrastructure Developers Limited	43,60,72,332	51%	41,66,09,067	51%
Anahera Investments Pte Ltd	21,37,60,685	25%	20,42,19,865	25%
Bricklayers Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Chiswick Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Stretford End Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Dangenham Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%

Details of Sponsor units	March 31, 2022		March 31, 2021	
IRB Infrastructure Developers Limited	43,60,72,332	51%	41,66,09,067	51%

Note : 15 : Other equity

Attributable to the equity holders

Other reserves	**March 31, 2022**	**March 31, 2021**
Retained earnings		
At the beginning of the year	(3,669.05)	(312.75)
Profit for the year	(4,435.98)	(3,252.48)
Less: Appropriations		
Pre-incoporation Profits		
Unit Issue expenses	(3.26)	(103.82)
At the end of the year	**(8,108.29)**	**(3,669.05)**
Total	**(8,108.29)**	**(3,669.05)**

(Amount in Millions.)

	March 31, 2022	March 31, 2021
Financial liabilities		
Note : 16 : Borrowings		
Non-current Borrowings		
Term loans		
Indian rupee loan from banks (secured)		
Project loans for SPVs	78,298.59	74,939.04
Less : current maturities expected to be settled within 12 month from balance sheet date	(429.15)	(467.24)
Total (a)	**77,869.44**	**74,471.80**
Indian rupee loan from financial institutions (secured)		
Project loans for SPVs	10,328.45	10,330.67
Less : current maturities expected to be settled within 12 month from balance sheet date	(59.79)	(99.91)
Total (b)	**10,268.66**	**10,230.76**
Non-convertible debentures (secured)	5,497.18	5,563.63
Less : current maturities expected to be settled within 12 month from balance sheet date	(110.76)	(62.15)
Total (c)	**5,386.42**	**5,501.48**
Less: Unamortised transaction cost **(d)**	(964.70)	(1,042.72)
Total non current borrowings (e = a + b + c + d)	**92,559.82**	**89,161.31**
Current Borrowings		
Short-term borrowings (secured)		
Current maturity of long term loans		
Indian rupee loan from banks (secured)	429.15	467.24
Indian rupee loan from financial institutions (secured)	59.79	99.91
Non convertible debentures (secured)	110.76	62.15
Interest accrued but not due on borrowings	33.73	-
(Unsecured, repayable on demand and interest free)		
Loan from related parties (refer note 39)	4,085.74	4,155.57
Total current borrowings (f)	**4,719.18**	**4,784.87**
Total borrowings (e+f)	**97,279.00**	**93,946.18**
Aggregate secured loans	93,159.52	89,161.31
Aggregate unsecured loans	4,085.74	4,155.57

(i) Project loans for SPVs

March 31, 2022: Rs. 94,124.22 millions; March 31, 2021: Rs. 90,833.34 millions; pertains to term loans taken by SPV's (Special Purpose Vehicles) for Project financing.

Rate of interest

Rate of interest on the Indian Rupee loan from banks and financial institutions varies from 8.25% to 10.40% p.a. (March 31, 2021: 9.85% to 11.90%) and are secured by pledge of shares of its subsidiaries and subservient charge on the current assets of the company to the extent of 125% of the outstanding loan.

Nature of security

i) Secured by first charge on the movable/immovable asset by way of mortgage/hypothecation; first charge on all intangible assets, present and future; assignment of all receivables; book debts and all rights and interest in project, both present and future, excluding the Project Assets of respective companies;

ii) Secured by first charge on the Escrow Account, Debt Service Reserve Account and any other reserves and other bank accounts of the respective Companies.

iii) An irrevocable and unconditional corporate guarantee from IRB Infrastructure Developers Limited to meet shortfall (if any) between debt due and termination payments received from Concessioning Authority in case of termination of Concession Agreement for any reason in case of Project SPV’s.

Repayment terms

The Indian rupee loans are repayable in structured monthly installments commencing after commercial operation date such that the total tenor does not exceed 17 years and repayable as per the repayment schedule specified in common loan agreement with the Lenders.

	March 31, 2022	March 31, 2021
Note : 17 : Trade payables		
Total outstanding dues of micro enterprises and small enterprises (refer note 29)	3.69	13.18
Total outstanding dues of creditors other than micro and small enterprises		
- Related parties (refer note 39)	10,022.93	1,655.04
- Others	1,191.71	892.03
Total	**11,218.34**	**2,560.24**

(Amount in Millions.)

	March 31, 2022		March 31, 2021	
	Current	**Non-current**	**Current**	**Non-current**
Note 18 : Other financial liabilities				
Obligation for construction	2,009.01	-	11,204.52	-
Directors sitting fees payable	0.36	-	0.25	-
Deposit	1.13	-	1.07	-
Retention money payable				
- Related parties (refer note 39)	256.48	-	190.34	-
- Others	336.92	-	318.04	3.05
Revenue share payable	225.81	-	51.97	-
Other payable				
- Related parties (refer note 39)	193.42	35,168.79	8,432.67	24,717.75
Total	**3,023.13**	**35,168.79**	**20,198.86**	**24,720.81**

	March 31, 2022	**March 31, 2021**
Note : 19 : Trade payables		
a) Total outstanding dues of micro enterprises and small enterprises micro and small enterprises		
'- Related parties	5,998.85	2,463.41
'- Others	-	-
	5,998.85	**2,463.41**

Note 20 : Provisions

	March 31, 2022		March 31, 2021	
	Current	**Non-current**	**Current**	**Non-current**
Others				
Major maintenance expenses	-	1,350.57	-	357.84
Total	**-**	**1,350.57**	**-**	**357.84**

The movement in provision for resurfacing expenses is as follows:	**March 31, 2022**	**March 31, 2021**
Opening balance	357.84	64.96
Obligation on new toll projects	992.73	292.88
Utilised / reversed during the year	-	-
Closing balance	**1,350.57**	**357.84**

The above provisions are based on current best estimation of expenses that may be required to fulfill the resurfacing obligation as per the service concession agreement with regulatory authorities. It is expected that significant portion of the costs will be incurred over the period. The actual expense incurred may vary from the above. No reimbursements are expected from any sources against the above obligation.

	March 31, 2022	**March 31, 2021**
Note 21 : Other current liabilities		
Advance from customers		
Duties and taxes payable	129.65	59.05
Advance from customer- Others	10.50	50.73
Total	**140.15**	**109.78**

(Amount in Millions.)

	March 31, 2022	March 31, 2021
Note 22 : Revenue from operations		
Contract revenue (road construction)	1,054.48	1,863.70
Income arising out of toll collection (net)	10,598.07	8,549.77
Revenue share to NHAI- Fastag	(212.87)	(51.97)
Other operating revenue	965.16	-
Total	**12,404.84**	**10,361.51**
Note 23 : Other income		
Interest income on		
- Bank deposits	73.64	74.46
- Others	8.05	7.59
Profit on sale of investments	13.93	13.08
Fair value gain on mutual funds	0.78	1.43
Other non operating income	3.73	13.28
Gain/(loss) on fair value measurement of other payable	-	2.86
Total	**100.13**	**112.71**
Note 24 : Road work and site expenses		
Contract expenses	1,036.47	1,807.12
Operation and maintenance expenses	2,899.41	2,113.67
Site and other direct expenses	-	41.03
Sub-contracting / Security expenses	0.72	5.31
Technical consultancy and supervision charges	53.20	16.28
Total	**3,989.80**	**3,983.41**
Note 25 : Depreciation and amortisation expenses		
Depreciation on property, plant and equipment (refer note 4)	1.74	2.59
Amortisation on intangible assets (refer note 4)	1,673.16	1,253.09
Total	**1,674.90**	**1,255.69**
Note 26 : Finance cost		
Interest expense		
- Banks and financial institutions	8,670.13	8,046.33
- Unwinding of retention money	48.71	48.70
Other borrowing costs	-	
- Amortisation of Transaction cost	78.02	78.43
- Unwinding of discount on provision of MMR	39.64	5.47
- Interest unwinding of Trade Payable- Associates	655.78	-
- Others	46.44	49.24
Total	**9,538.70**	**8,228.17**

(Amount in Millions.)

	March 31, 2022	March 31, 2021
Note 27 : Other expenses		
Rent	0.24	0.29
Rates and taxes	31.64	15.40
Insurance	1.12	11.43
Director sitting fees	1.61	1.24
Legal and professional expenses	192.64	69.25
Payment to auditor (including GST)	3.13	3.88
Corporate social responsibilities expenditure	8.00	31.40
Bank charges	5.54	3.01
Miscellaneous expenses	1.19	2.43
Fair value loss on measurement of other payable	2,161.31	-
Total	**2,406.43**	**138.32**
Payment to auditor (including GST)		
As auditors:		
- Statutory audit fees	1.23	2.19
- Limited review fees	1.70	1.12
In other capacity	-	-
- Other services (certification fees)	0.17	0.56
Reimbursement of expenses	0.04	0.02
Total	**3.13**	**3.88**

Note 28 : Commitment and Contingencies

a. Leases
Rent / lease payments under operating lease are recognised as an expense in the Consolidated Statement of profit and loss on a straight line basis over the lease term.

Operating lease

(Rs in millions)

	March 31, 2022	March 31, 2021
a) Future lease rental payments under non-cancellable operating lease are as follows:-		
i) Not later than one year	-	-
ii) Later than one year and not more than five year	-	-
iii) Later than five year	-	-
b) Lease payment recognised in the consolidated statement of profit and loss	0.24	0.29
c) General description of the leasing agreement		
i) Leased assets – accommodation for employees	-	-
ii) Future lease rentals are determined on agreed terms	-	-

b. Capital commitments

	March 31, 2022	March 31, 2021
Estimated value of contracts in capital account remaining to be executed	625.98	10,679.14

c. Contingent liabilities
Contingent liabilities not provided for

	March 31, 2022	March 31, 2021
Guarantees given by the Group to suppliers, government bodies and performance guarantee		
For Service Tax, ESIC, Custom Duty, Other Finance expenses and Stamp duty matters	-	-
Total	-	-

UTL, CGTL and KGTL have filed Writ petition with Hon'ble Rajasthan High Court with prayer to commence payment of Premium to National Highways Authority of India (NHAI) six months post actual completion of the project construction work. The Hon'ble High Court prima facie agreed with the contention of these companies and had provided interim relief from payment of premium. Vide judgement order dated 25th August, 2021, the Hon'ble High Court found merit in the contention of the companies and has directed the parties to resolve the dispute under Arbitration. The said matter is currently pending under Arbitration.

Note 29 : Trade payable

Under the Micro, Small and Medium Enterprises Development Act, 2006 ('MSMED') which came into force from 2 October 2006, certain disclosures are required to be made relating to Micro, Small and Medium enterprises. On the basis or the informntion and records available with the management, there are no overdue amount to the Micro and Small enterprises as defined in the Micro, Small Medium Enterprises Development Act, 2006 as set out in the following disclosures:

The disclosure in respect of the amount payable to enterprises which have provided goods and services to the Group and which qualify under the definition of micro and small enterprises, as defined under Micro, Small and Medium Enterprises Development Act, 2006 has been made in the consolidated financial statement as at March 31, 2022 based on the information received and available with the Group.

Particulars	March 31, 2022	March 31, 2021
Principal amount remaining unpaid to any supplier as at the period end	3.69	13.18
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

MSME ageing schedule as at

Particulars	**March 31, 2022**	**March 31, 2021**
MSME Undisputed Dues	-	-
Less than 1 year	3.69	13.18
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total dues to micro and small enterprises as per MSMED Act, 2006	**3.69**	**13.18**

There are no disputed dues to micro and small enterprises as per MSMED Act, 2006. The amounts payable to MSME are not due for payments.

b) Ageing of creditors other than micro enterprises and small enterprises as at

Particulars	March 31, 2022	March 31, 2021
Undisputed Dues		
Less than 1 year	13,369.16	3,347.92
1-2 Years	3,808.21	1,639.89
2-3 Years	12.82	22.11
More than 3 years	23.32	0.56
Total dues to creditors other than micro enterprises and small enterprises as at	**17,213.50**	**5,010.48**

There are no disputed dues to creditors other than micro enterprises and small enterprises.

Note 30 : Intangble Asset under development ageing schedule

a) Intangible asset under development (Rs in millions)

Particulars	March 31, 2022	March 31, 2021
Less than 1 year	1,055.74	1,289.86
1-2 Years	59.90	1,376.22
2-3 Years	175.24	1,699.63
More than 3 years	-	318.55
Total	**1,290.89**	**4,684.26**

b) Intangible asset under development

Particulars	March 31, 2022	March 31, 2021
To be completed in		
Less than 1 year	1,290.89	4,684.26
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total	**1,290.89**	**4,684.26**

Note 31 : Fair values

The carrying values of financials instruments of the Group are reasonable and approximations of fair values.

	Carrying amount		**Fair Value**	
	March 31, 2022	**March 31, 2021**	**March 31, 2022**	**March 31, 2021**
Financial assets				
Financial assets measured at amortised cost				
Loans	-	-	-	-
Other Financial assets	1,606.92	639.27	1,606.92	639.27
Financial assets measured at fair value through statement of Profit & Loss				
Investments (Quoted)	659.54	572.50	659.54	572.50
Financial assets measured at amortised cost				
Investments (Unquoted)	-	-	-	-
Trade receivable	51.55	100.24	51.55	100.24
Cash and cash equivalents	287.23	413.49	287.23	413.49
Other Bank balances	2,469.97	1,744.35	2,469.97	1,744.35
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	17,217.19	5,023.65	17,217.19	5,023.65
Borrowings	97,279.00	93,946.18	97,279.00	93,946.18
Other financial liabilities	38,191.92	44,919.67	38,191.92	44,919.67

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the Group has determined that market participants would take into account when pricing the investments.

Note 32 : Fair value hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price in active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2022:

(Rs in millions)

	As on Mar 31, 2022	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	**659.54**	659.54	-	-
Trade Receivable	**51.55**	-	-	51.55
Cash and cash equivalents	**287.23**	-	-	287.23
Bank balance other than above	**2,469.97**	-	-	2,469.97
Loans	**-**	-	-	-
Other Financial assets	**1,606.92**	-	-	1,606.92
Liabilities				
Borrowings	**97,279.00**	-	-	97,279.00
Trade Payable	**17,217.19**	-	-	17,217.19
Other financial liabilities	**38,191.92**	-	-	38,191.92

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2021:

(Rs in millions)

	As on March 31, 2021	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	**572.50**	572.50	-	-
Trade Receivable	**100.24**	-	-	100.24
Cash and cash equivalents	**413.49**	-	-	413.49
Bank balance other than above	**1,744.35**	-	-	1,744.35
Loans	**-**	-	-	-
Other Financial assets	**639.27**	-	-	639.27
Liabilities				
Borrowings	**93,946.18**	-	-	93,946.18
Trade Payable	**5,023.65**	-	-	5,023.65
Other financial liabilities	**44,919.67**	-	-	44,919.67

Note 33 : Financial risk management objectives and policies

The Group’s risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group’s activities.

The Board of Directors have overall responsibility for the establishment and oversight of the Group’s risk management framework.

In performing its operating, investing and financing activities, the Group is exposed to the Credit risk, Liquidity risk and Currency risk.

Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits, FVTOCI investments and derivative financial instruments.

Credit risk on financial assets

Credit risk is the risk that counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Company is exposed to credit risk from its operating activities (primarily trade receivables) and from its financing activities, including deposits with banks and financial institutions, foreign exchange transactions and other financial instruments.

Financial instruments

Credit risk from balances with banks, trade receivables, loans and advances and financial institutions is managed by the Group's management in accordance with the Group's policy. Investments of surplus funds are made only with approved counterparties and within credit limits assigned to each counterparty. Counterparty credit limits are reviewed by the top management on an annual basis, and may be updated throughout the year subject to approval of the Company's board of directors. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through counterparty's potential failure to make payments.

Trade receivables and Loans and Advances

Customer credit risk and Loans and advances is managed by each business unit subject to the Group's established policy, procedures and control relating to customer credit risk management. An impairment analysis is performed at each reporting date on an individual basis for major trade receivables and loan and advances. The Group has not identifed any impairment loss as at March 31, 2022

The following table provides information about the ageing of gross carrying amount of trade recievables as at :

(Rs in millions)

Gross Carrying Amount	March 31, 2022	March 31, 2021
Undisputed Trade recievables -	-	-
Less than 6 months	-	78.58
6 months - 1 year	29.37	-
1-2 Years	0.51	21.66
2-3 Years	21.66	
Total	**51.55**	**100.24**

Other financial assets

Credit risk from balances with banks and financial institutions is managed by the Group in accordance with the Group's policy. Investments of surplus funds are made only in highly marketable debt instruments with appropriate maturities to optimise the cash return on instruments while ensuring sufficient liquidity to meet its liabilities.

Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates.

The Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate borrowings.

Interest rate sensitivity

The following table demonstrates the sensitivity to a reasonably possible change in interest rates on that portion of loans and borrowings affected, after excluding the credit exposure on fixed rate borrowing. With all other variables held constant, the Group's profit before tax is affected through the impact on floating rate borrowings, as follows:

	Borrowings	**Fixed Deposits**	**Borrowings**	**Fixed Deposits**
Balance of Fixed Deposit and Borrowings	**March 31, 2022**		**March 31, 2021**	
- INR Millions	94,124.22	2,469.97	90,833.34	1,744.35
Increase in basis points - INR	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax - INR Millions	(470.62)	12.35	(454.17)	8.72
Decrease in basis points - INR	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax - INR Millions	470.62	(12.35)	454.17	(8.72)

Liquidity risk

Liquidity risk is the risk that the Group may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Group's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements. The Group closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt from banks at an optimised cost.

The table below summarises the maturity profile of the Group's financial liabilities based on contractual undiscounted payments:

As at March 31, 2022	**Carrying amt**	**Total**	**On Demand**	**Less than 1 year**	**1 to 5 years**	**> 5 years**
Long term Borrowings (Gross of unamortised transaction cost)#	98,243.70	98,243.70	4,085.74	633.43	14,152.24	79,372.29
Other financial liabilities	38,191.92	38,191.92	-	3,023.13	35,168.79	-
Trade payables	17,217.19	17,217.19	-	11,218.34	5,998.85	-
Total	**1,53,652.81**	**1,53,652.81**	**219.09**	**14,874.90**	**38,387.32**	**78,216.92**

As at March 31, 2021	**Carrying amt**	**Total**	**On Demand**	**Less than 1 year**	**1 to 5 years**	**> 5 years**
Borrowings	93,946.19	93,946.19	219.09	4,307.07	11,203.11	78,216.92
Other financial liabilities	44,919.67	44,919.67	-	20,198.87	24,720.80	-
Trade payables	5,023.65	5,023.64	-	2,560.23	2,463.41	-
Total	**1,43,889.52**	**1,43,889.51**	**219.09**	**27,066.17**	**38,387.32**	**78,216.92**

Note 34 : Capital management

Capital includes equity attributable to the equity holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise shareholder value. The Group manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the Project SPV Group may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the year ended March 31, 2022.

The Group monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

	March 31, 2022	March 31, 2021
Borrowings	97,279.00	93,946.18
Less: cash and cash equivalents (Note 10)	(287.23)	(413.49)
Net debt	96,991.77	93,532.69
Equity (Note 14 and 15)	77,396.04	78,018.95
Total equity	77,396.04	78,018.95
Capital and net debt	1,74,387.81	1,71,551.64
Gearing ratio (%)	55.62%	54.52%

In order to achieve this overall objective, the Group's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period.

Note 35

(a) During the year ended March 31, 2022, the Group has paid/accrued Rs. 1,779.36 millions (March 31, 2021, Rs. 875.53 millions) as Revenue Share to National Highways Authority of India ("NHAI") out of its toll collection in accordance with the Concession Agreements entered with NHAI. Income from Operations in the financials for the above periods is net off the above Revenue Share to NHAI.

(b) During the year ended March 31, 2017, AE Tollway Limited (AETL) has entered into a Concession agreement (CA) with NHAI for a period of 24 years. As per the terms of the CA, AETL has agreed to pay a premium in the form of "Additional Concession Fee" equal to Rs. 810.00 millions for the first year and each subsequent year such premium shall be determined by increasing the amount of premium in the respective year by an additional 5% as compared to the immediately preceding year. Management based on the legal opinion obtained and their evaluations of the terms of the CA, believes that such premium payable is restricted to the toll collection during the year and is in the form of revenue sharing arrangement. Accordingly, the premium payable for the year is accounted for as revenue share. The said treatment has been followed in case of CGTL and UTL where premium payment has commenced during the current year.

Note 36: Grant from Government Authorities

As per Article 25 of the respective Concession Agreement with the National Highways Authority of India (‘NHAI’ or ‘the Grantor’), the Concessionaires are entitled to receive Grant for meeting the part of the project cost subject to the conditions laid down in the concession agreement. The details are as under:

(Rs in millions)

Name of the Company	Eligible for Grant	Grant received in FY 2016-17	Grant received in FY 2017-18	Grant received in FY 2018-19	Grant yet to be received
SYTL	1,890.00	1,391.70	403.80	**94.50**	-
KTL	2,340.00	1,533.79	806.21	**-**	-
YATL	5,580.00	-	4,230.24	**1,349.76**	-
IRBWTL	5,362.20	4,512.30	-	**849.90**	-
Total	**15,172.20**	**7,437.79**	**5,440.25**	**2,294.16**	**-**

Note 37 : Events after reporting period

No subsequent event has been observed which may require an adjustment to the balance sheet.

Note 38: Information on segment reporting pursuant to Ind AS 108 - Operating Segments

The Project SPV Group has identified business segment in accordance with Indian Accounting Standard 108 “Operating Segment” notified under section 133 of the Companies Act 2013, read together with relevant rules issued thereunder. The Group has identified Built, Operate and Transfer (‘BOT’) as its single reportable segment. Moreover the Group's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

IRB Infrastructure Trust
Notes to Consolidated Financial Statements for the year ended March 31, 2022

Note 39 : Related party disclosures

List of Related parties of the Fund

(i)	Parties to the InvIT	IRB Infrastructure Developers Limited (Sponsor and Project Manager)
		MMK Toll Road Private Limited (Investment Manager)
		IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
(ii)	Associates, Promoters, Directors and Partners of the persons mentioned in clause (i) and (ii)	As per table below

List of associates, promoters, directors and partners of the persons mentioned in clause (i) and (ii)

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manager)**	**MMK Toll Road Private Limited (Investment Manager)**	**IDBI Trusteeship Services Limited (Trustee of IRB Infrastructure Trust)**
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Virendra D. Mhaiskar (HUF)	IRB Infrastructure Developers Limited (IRBIDL)	IDBI Bank Limited LIC Corporation Limited General Insurace Corporation
Directors	Mr. Virendra D. Mhaiskar, Chairman and Managing Director Mrs. Deepali V. Mhaiskar, Whole Time Director Mr. Mukeshlal Gupta, Joint Managing Director (utpo 29 December 2021) Mr. Sudhir Rao Hoshing, Joint Managing Director (utpo 29 December 2021) and Chief Executive Officer Mr. Jose Angel Tamariz Martel Goncer, Additional Non-Executive Director (wef 29 Deember 2021) Mr. Carlos Ricardo Ugarte Cruz Coke, Additional Non-Executive Director (wef 29 Deember 2021) **Independent Directors** Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Ms. Priti Savla, Independent Director (wef February 10, 2022) Mrs. Heena Raja, Independent Director (utpo February 10, 2022)	Mr. Virendra D. Mhaiskar Mr. Boon Chin Hau **Independent Directors** Mr. K.G. Krishnamurty Ms. Ranjana Paranjape	Mr. J. Samuel Joseph Mr. Ravishankar G. Shinde Ms. Madhuri J. Kulkarni Mr. Swapan Kumar Bagchi Ms. Jayashree Ranade Ms. Padma Betai Ms. Sashikala Muralidharan (upto Jan 16, 2020)
Associates	**A) Holding Company of Sponsor / Project Manager** IRB Holding Private Limited (Formerly known as Mhaiskar Ventures Private Limited) **B) Subsidiary Companies of Sponsor / Project Manager** **Project SPVs** 1. IRB Westcoast Tollway Limited (IRBWTL) (upto 26 February 2020) 2. Solapur Yedeshi Tollway Limited (SYTL) (upto 26 February 2020) 3. Yedeshi Aurangabad Tollway Limited (YATL) (upto 26 February 2020) 4. Kaithal Tollway Limited (KTL) (upto 26 February 2020) 5. AE Tollway Limited (AETL) (upto 26 February 2020) 6. Udaipur Tollway Limited (UTL) (upto 26 February 2020) 7. CG Tollway Limited (CGTL) (upto 26 February 2020) 8. Kishangarh Gulabpura Tollway Limited (KGTL) (upto 26 February 2020) 9. IRB Hapur Muradabad Tollway Limited (IRBHMTL) (upto 26 February 2020)		

	Others 1. Ideal Road Builders Private Limited (IRBPL) 2. Mhaiskar Infrastructure Private Limited (MIPL) 3. Modern Road Makers Private Limited (MRMPL) 4. Aryan Toll Road Private Limited (ATRPL) 5. ATR Infrastructure Private Limited (ATRFL) 6. IRB Infrastructure Private Limited (IRBFL) 7. Thane Ghodbunder Toll Road Private Limited (TGTRPL) 8. Aryan Infrastructure Investments Private Limited (AIIPL) 9. IRB MP Expressway Private Limited (formerly known as NKT Road and Toll Private Limited) 10. MMK Toll Road Private Limited (MMK) (upto 26 February 2020) 11. IRB Kolhapur Integrated Road Development Company Private Limited (IRBK) 12. Aryan Hospitality Private Limited (AHPL) 13. IRB Sindhudurg Airport Private Limited (IRBSA) 14. IRB Goa Tollway Private Limited (IRB Goa) 15. IRB PS Highway Private Limited (formerly known as MRM Highways Private Limited) (IRBPS) 16. IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV) 17. MRM Mining Private Limited (Formerly "J J Patel Infrastructural and Engineering Private Limited") (Subsidiary of MRMPL) 18. GE1 Expressway Private Limited (formerly known as IRB PP Project Private Limited) 19. VK1 Expressway Private Limited (VK1) 20. Modern Estate (Partnership Firm) (upto 23 November 2020) 21. Pathankot Mandi Highway Private Limited (w.e.f. 23 April 2021) 22. Chittoor Thachur Highway Private Limited (w.e.f. 13 October 2021) 23 .VM7 Expressway Private Limited (w.e.f. 14 August 2020) 24. Palshit Dhankuni Tollway Private Limited (w.e.f. 15 April 2021) 25. Meerut Budaun Expressway Private Limited (w.e.f. 5 January 2022) **C) Other Associate Companies of Sponsor / Project Manager** 1. VCR Toll Services Private Limited 2. VDM Ventures Private Limited 3. DEUX Farming Films Private Limited 4. IRB Charitable Foundation **Key Managerial personnel of Project SPV Group** (Only with whom Project SPV Group had transactions during the year/ there was balance outstanding at the year end) 1. Mr. Rajendra Kumar Agarwal (upto March 30, 2018) 2. Mr. Darshan Sangurdekar 3. Mr. Omprakash Singh 4. Jitendra Sharma (upto February 28, 2022) 5. Mrs. Heena Raja (upto October 01, 2021) 6. Mr. C. S. Kaptan 7. Ms. Shilpa Todankar 8. Mrs. Ranjana Paranjape (w.e.f October 06, 2021) 9. Mr.Abhay Phatak (w.e.f. March 09, 2022)

I. Related Party Transactions (Rs. in millions)

Sr. No.	Particulars	Sponsor and Project Manager		Fellow subsidaries of Project SPV Group		Key Management Personnel of Project SPV Group	
		March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021
1	**Contract expenses**	**-**	**-**	**629.52**	**921.31**	-	-
	Modern Road Makers Private Limited	-	-	629.52	921.31	-	-
2	**Operation & Main. Expenses**	**1,906.45**	**1,826.29**	-	-	-	-
	IRB Infrastructure Developers Limited	1,906.45	1,826.29	-	-	-	-
3	**Finance Cost -Interest unwinding on Trade payable**	-	-	**655.79**	-	-	-
	Modern Road Makers Private Limited	-	-	655.79	-	-	-
4	**Share application money received**	-	**2,603.81**	-	-	-	-
	IRB Infrastructure Developers Limited	-	2,603.81	-	-	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	-	-
5	**Allotment of Equity Share**	-	**2,603.81**	-	-	-	-
	IRB Infrastructure Developers Limited	-	2,603.81	-	-	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	-	-
6	**Expenses incurred on our behalf**	-	**5.71**	**-**	**6.05**	-	-
	IRB Infrastructure Developers Limited	-	5.71	-	-	-	-
	Modern Road Makers Private Limited	-	-		6.05	-	-
7	**Mobilisation advances recovered**	**743.02**	**1,672.70**	-	-	-	-
	IRB Infrastructure Developers Limited	743.02	1,672.70	-	-	-	-
8	**Material Aggregate Purchase**	-	**-**	**1,555.19**	**2,062.51**	-	-
	Modern Road Makers Private Limited	-	-	1,555.19	2,062.51	-	-
9	**Advance given including BG margin given**	**451.03**	**208.50**	**62.57**	**75.42**	-	-
	IRB Infrastructure Developers Limited	451.03	208.50	-	-	-	-
	Modern Road Makers Private Limited	-	-	62.57	75.42	-	-
10	**General advance recovered - EPC**	**394.25**	**183.71**	**62.48**	**75.42**	**-**	**-**
	IRB Infrastructure Developers Limited	394.25	183.71	-	-	-	-
	Modern Road Makers Private Limited	-	-	62.48	75.42	-	-
11	**Construction cost**	**8,484.71**	**13,535.60**	**-**	**2,194.10**	-	-
	IRB Infrastructure Developers Limited	8,484.71	13,535.60	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	2,194.10	-	-
12	**Amount held up**	-	-	**2.76**	**7.51**	-	-
	Modern Road Makers Private Limited	-	-	2.76	7.51	-	-
13	**Other payable**	**-**	**3.88**	**-**	**5.85**	-	-
	IRB Infrastructure Developers Limited		3.88	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	5.85	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	-	-
	Mhaiskar Infrastrcture Private Limited	-	-		-	-	-

I. Related Party Transactions (Rs. in millions)

Sr. No.	Particulars	Sponsor and Project Manager		Fellow subsidaries of Project SPV Group		Key Management Personnel of Project SPV Group	
		March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021
14	**Other payable**	**-**	**-**	**48.71**	**48.71**	-	-
	IRB Infrastructure Developers Limited	-		-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	-	48.71	48.71	-	-
15	**Fair value loss on measurement of other payable**	**2,161.31**	**-**				
	IRB Infrastructure Developers Limited	2,161.31	-				
16	**Expenses incurred on our behalf**	**1.77**					
	IRB Infrastructure Developers Limited	1.77					
17	**Unsecured Loan received**	**4,759.00**	**3,677.76**				
	IRB Infrastructure Developers Limited	4,759.00	3,677.76				
18	**Other payable repayment**	**-**	**5,105.50**	**-**	**1.17**	-	-
	IRB Infrastructure Developers Limited	-	5,105.50	-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	-		1.17	-	-
19	**Unsecured Loan repaid**	**4,828.83**	**-**				
	IRB Infrastructure Developers Limited	4,828.83	-				
20	**Units Issued**	**1,946.33**	**-**	-	-	-	-
	IRB Infrastructure Developers Limited	1,946.33	-	-	-	-	-
21	**Trade payable**	**-**	-	**12.88**	-	-	-
	MMK Toll Road Private Limited	-	-	12.88	-	-	-
22	**Additional Intangible Asset**	-	-	**7,148.39**	-	-	-
	Modern Road Makers Private Limited	-	-	7,148.39	-	-	-
23	**Short - term borrowings taken (unsecured)**	-	**477.81**	-	-	-	-
	IRB Infrastructure Developers Limited	-	477.81	-	-	-	-
24	**Director sitting fees paid**	-	-	-	-	**1.65**	**1.23**
	Mr. Darshan Sangurdekar	-	-	-	-	0.23	0.17
	Mr.Omprakash Singh	-	-	-	-	0.23	0.18
	Mr. Jitendra Sharma	-	-	-	-	0.41	0.37
	Mrs. Heena Raja	-	-	-	-	0.06	0.08
	Mr. C S Kaptan	-	-	-	-	0.39	0.24
	Ms. Shilpa Todankar	-	-	-	-	0.26	0.19
	Mrs.Ranjana Paranjape	-	-	-	-	0.05	-
	Mr. Abhay Pathak	-	-	-	-	0.02	-

IRB Infrastructure Trust
Notes to Consolidated Financial Statements for the year ended March 31, 2022

II. Related party balances

(Rs. in millions)

Sr. No.	Particulars	Sponsor and Project Manager		Fellow subsidaries of Project SPV Group		Key Management Personnel of Project SPV	
		March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021
1	**Short-term borrowings**	**477.81**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	477.81	-	-	-	-	-
2	**Trade payable**	**1,189.05**	**1,119.15**	**11,968.59**	**2,925.97**	**-**	**-**
	IRB Infrastructure Developers Limited	1,189.05	1,119.15	-	-	-	-
	Modern Road Makers Private Limited	-	-	11,888.28	2,925.97	-	-
	MMK Toll Road Private Limited	-	-	80.31	-	-	-
3	**Mobilisation advances**	**435.80**	**1,522.77**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	435.80	1,522.77	-	-	-	-
4	**Advance given**	**502.86**	**102.14**	**0.03**	**1.17**	**-**	**-**
	IRB Infrastructure Developers Limited	502.86	102.14	-	-	-	-
	Modern Road Makers Private Limited	-	-	0.03	1.17	-	-
5	**Retention payable**	**-**	**-**	**256.49**	**190.35**	**-**	**-**
	Modern Road Makers Private Limited	-	-	256.49	190.35	-	-
6	**Other payable including BG margin payable**	**31,711.77**	**29,550.45**	**3,648.68**	**3,599.97**	**-**	**-**
	IRB Infrastructure Developers Limited	31,711.77	29,550.45	-	-	-	-
	Modern Road Makers Private Limited	-	-	1,800.83	1,800.83	-	-
	IRB Goa Tollway Private Limited	-	-	1,544.86	1,544.86	-	-
	Mhaiskar Infrastructure Private Limited	-	-	302.98	254.28	-	-
7	**Other payable (Exp incurred on our behalf)**	**1.77**	**-**				
	IRB Infrastructure Developers Limited	1.77	-				
8	**Unsecured Loan / other payable**	**3,607.93**	**4155.57**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	3,607.93	4155.57	-	-	-	-
9	**Trade Receivable**	**-**	**-**	**0.51**	**0.51**	**-**	**-**
	Modern Road Makers Private Limited	-	-	0.51	0.51	-	-
10	**BG margin money receivable**	**-**	**0.54**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	-	0.54	-	-	-	-
11	**Expense payable**	**938.23**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	938.23	-	-	-	-	-
12	**Director sitting fees Payable**	**-**	**-**	**-**	**-**	**0.43**	**0.28**
	Mr. Rajendra kumar Agarwal	-	-	-	-	0.01	-
	Mr. Darshan Sangurdekar	-	-	-	-	0.05	0.04
	Mr. Omprakash Singh	-	-	-	-	0.05	0.04
	Mr. Jitendra Sharma	-	-	-	-	0.09	0.09
	Mrs. Heena Raja	-	-	-	-	-	0.02
	Mr. C S Kaptan	-	-	-	-	0.11	0.08
	Miss Shilpa Todankar	-	-	-	-	0.09	0.01
	Mrs. Ranjana Paranjape	-	-	-	-	0.03	-

Note 40 : Disclosure pursuant to Appendix - A to Ind AS 11 - " Service Concession Arrangements" ('SCA')

(A) Disclosures with regard to Toll Collection Rights (Intangible Assets)

Sr. No.	Name of Concessionaire	Start of concession period under concession agreement (Appointed date)	End of concession period under concession agreement	Period of concession since the appointed date	Construction completion date or expected construction completion date, as applicable
1	IRB Westcoast Tollway Limited	March 3, 2014	March 2, 2042	28 years	June 30, 2022
2	Solapur Yedeshi Tollway Limited	January 21, 2015	January 20, 2044	29 years	October 15, 2019
3	Yedeshi Aurangabad Tollway Limited	July 1, 2015	June 30, 2041	26 years	September 24, 2020
4	Kaithal Tollway Limited	July 15, 2015	July 14, 2042	27 years	March 29, 2019
5	AE Tollway Limited	August 1, 2016	July 31, 2040	24 years	November 24, 2020
6	Udaipur Tollway Limited	September 3, 2017	September 2, 2038	21 years from Appointed Date	June 01, 2021
7	CG Tollway Limited	November 4, 2017	November 3, 2037	20 years from Appointed Date	August 14, 2021
8	Kishangarh Gulabpura Tollway Limited	February 21, 2018	February 20, 2038	20 years from Appointed Date	June 30, 2022
9	IRB Hapur Moradabad Tollway Limited	May 28, 2019	May 26, 2041	22 years from Appointed Date	June 30, 2022

Note:

The above BOT/ DBFOT projects shall have following rights/ obligations in accordance with the Concession Agreement entered into with the Respective Government Authorities:-

a. Rights to use the Specified assets
b. Obligations to provide or rights to expect provision of services
c. Obligations to deliver or rights to receive at the end of the Concession.

Note 41: Earnings Per Unit (EPU)

EPU amounts are calculated by dividing the profit for the period attributable to unit holders by the weighted average number of Units outstanding during the year.

The following reflects the income and share data used in the EPU computations:

(Rs in millions)

	March 31, 2022	March 31, 2021
Profit attributable to unit holders for earnings	(4,435.98)	(3,252.48)
Weighted average number of Units for EPU	84,29,14,666	78,47,08,356
Face value per unit (in Rs)	100	100
Earning per unit (in Rs.)	(5.26)	(4.14)

Note 42 : COVID-19

The outbreak of Coronavirus (COVID-19) pandemic globally and in India is causing significant disturbance and slowdown of economic activity. As per the directions of the Ministry of Road Transport & Highways (MoRTH)/ National Highway Authority of India (NHAI), in order to follow MHA guidelines about commercial and private establishment in the wake of COVID-19 epidemic in the country, operations at the toll plaza of the Group were closed down w.e.f. 26th March, 2020. The toll operations were resumed from 20th April, 2020 by ensuring compliance with preventive measures in terms of guidelines/ instructions issue by Govt. of India to contain spread of Covid -19. Due to this, traffic for the toll road has been impacted. Management believes this is temporary and expects traffic will be normalised looking at the recent toll collection. In accordance with the Concession Agreement and NHAI policy no. 8.3.33/2020 and 8.4.20/2020 dated 26th May, 2020, the Group is eligible for extension of concession period with NHAI towards loss of revenue due to COVID-19 pandemic and NHAI is also extending COVID-19 loan to the Concessionaire for shortfall in cashflow.

The management has assessed and determined that considering the nature of its operations and overall revenue model, COVID-19 does not have material impact on the Group's financial position as at March 31, 2022 and its financial performance for the year then ended.

Note 43 : Other Statutory information

i) The Group have not traded or invested in Crypto currency or Virtual Currency during the financial year.

ii) The Group does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the Group.

iii) The Group do not have any transactions with companies struck off.

iv) The Group have not any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961 (such as, search or survey or any other relevant provisions of the Income Tax Act, 1961.

v) The Group have not received any fund from any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Group shall:

(a) directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Funding Party (Ultimate Beneficiaries) or

(b) provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

vi) The Group have not advance or loaned or invested (either from borrowed fund or share premium or any other source or kind of fund) by the company to or in any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Group shall:

(a) directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Group (Ultimate Beneficiaries) or

(b) provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

vii) The Group did not have any long-term contracts including derivative contract for which there were any material foreseeable losses.

viii) The Group has not declared a wilful defaulter by any bank/ financial institution or any other lender during the year.

Note 44 : Subsequent events

IRB Infrastructure Trust ("the Trust") has successfully completed fund raising by way of Rights Issue of Units amounting to Rs. 242.50 Crores from existing unitholders. The IRB Infrastructure Developers Limited (IRBIDL) being the Sponsor and 51% unitholder of the Private InvIT, invested Rs. 123.68 Crores and GIC Affiliates holding 49% units have invested Rs. 118.82 Crores. Post the rights issue, IRBIDL will continue to hold 51% units and GIC affiliates will continue to hold 49% units in the Trust.

Further, IRBIDL being the Sponsor of the Trust, has executed necessary Agreement/ documents for implementation of Palsit Dankuni Tollway Private Limited (PDTPL) by the Trust and accordingly, the Project will be executed by the IRBIDL and the Trust.

Note 45 : Previous year comparatives

Consequent to the issuance of " Guidance Note on Division II – Ind AS Schedule III to the Companies Act, 2013" certain items of financial statements have been regouped/ reclassified.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

Place : Mumbai
Date: 06/05/2022

gokhale & sathe (regd.)
chartered accountants
308/309, Udyog Mandir No. 1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016

INDEPENDENT AUDITOR'S REPORT
To the Unit Holders of IRB Infrastructure Trust
Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the accompanying consolidated financial statements of IRB Infrastructure Trust ("the InvIT" or "the Trust") and its subsidiaries (the Trust and its subsidiaries together referred to as "the Group"), which comprise the consolidated Balance Sheet as at 31 March 2021, the consolidated Statement of Profit and Loss including Other Comprehensive Income, the consolidated Statement of Cash Flows and the consolidated Statement of Changes in Unit Holder's Equity for the year ended 31 March 2021, the consolidated Statement of Net Assets at fair value and the consolidated Statement of Total Returns at fair value as at 31 March 2021 and notes to the consolidated financial statements including a summary of significant accounting policies and other explanatory information (hereinafter referred to as "the consolidated financial statements").

In our opinion and to the best of our information and according to the explanations given to us and based on the consideration of reports of other auditors on separate financial statements and on the other financial information of the subsidiaries, the aforesaid consolidated financial statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI lnvIT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards prescribed under Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended ("Ind AS") and other accounting principles generally accepted in India, of the consolidated state of affairs of the Group as at 31 March 2021, its consolidated Loss including other comprehensive income, its consolidated cash flows, consolidated changes in Unit holders' equity for the year ended 31 March 2021, the consolidated net assets at fair value and the consolidated total returns at fair value as at 31 March 2021.

Basis for Opinion

We conducted our audit of the consolidated financial statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the consolidated financial statements section of our report. We are independent of the Group in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the consolidated financial statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the consolidated financial statements.

Key Audit Matters

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Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current financial year. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

Particulars	How they were addressed in our audit
<u>Gain/Loss on fair value measurement of other payable / deferred consideration payable to IRB Group.</u> Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims. Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head 'Gain/Loss on fair value measurement of other payable'.	• We reviewed Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs. • We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made. • We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein. • We also reviewed the reasonableness of the variables applied in the said computation. • Based on the above, the fair value of liability to Sponsor estimated by the valuer taking into consideration the weighted average of probabilities of realization has been validated.
<u>Impairment Testing</u> The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment. The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the	• We evaluated management's assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management. • Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue. • Evaluated the potential changes in major

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recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights. Accordingly, the evaluation of impairment of toll collection rights has been determined a key audit matter.	components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were appropriate to the circumstances. • Assessed the appropriateness of the weighted average cost of capital used in determining recoverable amount. • Performed sensitivity analysis of key assumptions used in valuation. • Tested the arithmetical accuracy of the model.
Cost Overrun We have been informed that, since April 2020, due to pandemic situation, construction of certain projects have been affected and delayed, which has resulted into additional costs to projects in relation to machinery idling, labor expenses, material prices, restoration of damaged works etc. Considering above, SPVs have been charged with such additional costs. We were further informed that SPVs intend to raise claim to NHAI in this regard and shall repay the costs as per the contract immediately upon receipt of claims. Based on nature of transactions, the same are considered to be Key Audit Matter.	• We perused the legal opinion obtained in an earlier matter in case of IRB WC over similar issue to understand the tenability of the claims to be filed with Authority. • We reviewed addendum to the Project Implementation Agreement. • We also referred to the invoices raised on the SPVs. • Tested the arithmetical accuracy of fair valuation of accounting entries and presentation in financial statements. • Obtained clarity from the management regarding repayment plans in future years.

Information Other than the consolidated Financial Statements and Auditor's Report thereon

The Board of Directors of the Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Management Discussion and Analysis, Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations, but does not include the consolidated financial statements and our report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether
the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Board of Directors of Investment Manager for the Consolidated Financial Statements

The Board of Directors of Investment Manager is responsible for the preparation of these consolidated financial statements that give a true and fair view of the consolidated financial position as at 31 March 2021, consolidated financial performance including other comprehensive income, consolidated cash flows and consolidated changes in unit holder's equity for the year ended 31 March 2021, the consolidated net assets at fair value and the consolidated total returns at fair value as at 31 March 2021 in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended and relevant rules issued thereunder read with read with the SEBI InvIT Regulations. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the SEBI InvIT Regulations for safeguarding of the assets of the Group and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the consolidated financial statements that give a true and fair view and are free from material misstatement, whether due to fraud and error.

In preparing the consolidated financial statements, the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group are responsible for assessing the ability of the Group to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of the Investment Manager and the respective Board of Directors of the subsidiary companies included in the Group are also responsible for overseeing the financial reporting process.

Auditor's Responsibility for the Audit of the consolidated Ind AS Financial Statements

Our objectives are to obtain reasonable assurance whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also**:**

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors of the Investment Manager.

- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the audit of the financial statements of such entities included in the consolidated financial statements.

Materiality is the magnitude of misstatements in the consolidated financial statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other Matters

We did not audit the financial statements of 4 subsidiaries, whose financial statements reflect total assets of Rs. 1,01,599.26 million and net assets of Rs. 38,206.58 million as at 31 March 2021, total revenues of Rs. 3,426.73 million, Loss after taxes of Rs. 4,157.14 million and net cash inflows amounting to Rs. 27.79 million for the year ended on 31 March 2021, as considered in the consolidated financial statements. These financial statements have been audited by other auditors whose reports have been furnished to us by the Investment Manager and our opinion on the consolidated financial statements, in so far as it relates to the amounts and disclosures included in respect of these subsidiaries is based solely on the reports of the other auditors.

Our opinion above, on the consolidated financial statements, and our report on other legal and regulatory requirements below, are not modified in respect of the above matters with respect to our reliance on the work done by and the reports of the other auditors.

Report on Other Legal and Regulatory Requirements

Based on our audit and as required by SEBI InvIT Regulations, we report that**:**

a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit of the aforesaid consolidated financial statements.

b. In our opinion, proper books of account as required by law relating to preparation of the aforesaid consolidated financial statements have been kept by the Trust so far as it appears from our examination of those books and the reports of the other auditors.

c. The consolidated Balance Sheet, the consolidated Statement of Profit and Loss, the consolidated Statement of Cash Flows, the consolidated Statement of Changes in Unit Holders' Equity, the consolidated Statement of Net Assets at fair value and the consolidated Statement of Total Returns at fair value are in agreement with the books of account.

d. In our opinion, the aforesaid financial statements comply with the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For
Gokhale & Sathe
Chartered Accountants
FRN: 103264W

SD/-
CA. Chinmaya Deval
Partner
Membership No. 148652
UDIN: 21148652AAAAHV8814
Date: 24 May 2021.
Place: Mumbai

IRB Infrastructure Trust
Consolidated Balance Sheet as at March 31, 2021

(Amount in Millions.)

	Note No.	As at March 31, 2021	As at March 31, 2020
ASSETS			
Non-current assets			
Property, Plant and Equipment	4	10.60	13.18
Goodwill		604.54	604.54
Other Intangible assets	4	2,11,717.65	1,99,478.98
Intangible assets under development	4	4,684.26	13,853.63
Financial assets			
i) Loans	7	2.74	0.46
ii) Others	8	0.54	0.60
Other non-current assets	10	0.14	-
		2,17,020.47	**2,13,951.39**
Current Assets			
Financial assets			
i) Investments	5	572.50	-
ii) Trade receivables	6	100.24	352.12
iii) Cash and cash equivalents	11	413.49	189.70
iv) Bank balance other than (ii) above	12	1,744.35	1,576.40
v) Loans	7	6.89	4.63
vi) Others	8	629.10	395.63
Current tax assets (net)	13	147.11	207.90
Other current assets	14	2,166.40	3,399.05
		5,780.08	**6,125.43**
Total assets		**2,22,800.55**	**2,20,076.82**
EQUITY AND LIABILITIES			
Equity			
Unit Capital	15	81,688.00	76,582.50
Other equity	16	(3,669.05)	(312.75)
Total unit holder's equity		**78,018.95**	**76,269.75**
Non-current liabilities			
Financial liabilities			
i) Borrowings	17	89,161.31	77,374.13
ii) Other financial liabilities	19	24,720.81	35,070.78
iii) Trade payables	20	2,463.41	-
Provisions	21	357.84	64.96
Deferred tax liabilities (net)	9	424.33	395.71
		1,17,127.70	**1,12,905.58**
Current liabilities			
Financial liabilities			
i) Borrowings	17	4,155.57	0.00
ii) Trade payables	18		
a) total outstanding dues of micro enterprises and small enterprises		13.18	14.36
b) total outstanding dues of creditors other than micro enterprises and small enterprises		2,547.07	2,731.74
ii) Other financial liabilities	19	20,828.17	27,992.85
Other current liabilities	22	109.78	162.54
Current tax liabilities (net)		0.14	-
		27,653.91	**30,901.49**
Total liabilities		**1,44,781.60**	**1,43,807.07**
Total equity and liabilities		**2,22,800.55**	**2,20,076.82**

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)

SD/-
Chinmaya Deval
Partner
Membership No. 148652

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Financial Officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date: 24.05.2021

Place: Mumbai
Date: 24.05.2021

IRB Infrastructure Trust

Consolidated statement of Profit & Loss for the year ended March 31, 2021

(Amount in Millions.)

Particulars	Note No.	For the year ended March 31, 2021	For the month ended March 31, 2020
Income			
Revenue from operations	23	10,361.51	2,547.14
Other income	24	112.71	19.72
Total income		**10,474.22**	**2,566.86**
Expenses			
Cost of material consumed			-
Road work and site expenses	25	3,983.41	2,048.44
Depreciation and amortisation expenses	26	1,255.69	123.48
Finance costs	27	8,228.17	659.36
Investment Manager Fees		46.25	26.92
Other expenses	28	138.32	26.75
Total expenses		**13,651.84**	**2,884.95**
Profit before tax		**(3,177.62)**	**(318.09)**
Tax expenses			
Current tax		46.20	(6.54)
Deferred tax		369.63	1.20
MAT Credit utilisation / (Entitlement)		(340.97)	-
Total tax expenses		**74.86**	**(5.34)**
Profit/(Loss) after tax		**(3,252.48)**	**(312.75)**
Other comprehensive income			
Item that will not be reclassified to profit or loss:			
(a) Re-measurement (loss)/gain on defined benefit plans (net of taxes)			-
Other comprehensive (loss) for the year, net of tax		-	-
Total comprehensive (loss) for the year		**(3,252.48)**	**(312.75)**
Profit/(Loss) after tax		**(3,252.48)**	**(312.75)**
Attributable to:			
Owners of the Project SPV Group		(3,252.48)	(312.75)
Non-controlling interests		-	-
Attributable to:			
Unit holders of the Project SPV Group		(3,252.48)	(312.75)

The accompanying summary of significant accounting policies and other explanatory information (notes)are an integral part of Combined Financial Statements.

Earnings per unit (of Rs 10 each)			
Basic		(4.14)	(4.14)
Diluted		(4.14)	(4.14)
Summary of significant accounting policies	3		

The accompanying notes are an integral part of the Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)

SD/-
Chinmaya Deval
Partner
Membership No. 148652

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Financial Officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date: 24.05.2021

Place: Mumbai
Date: 24.05.2021

IRB Infrastructure Trust
Statement of Changes in unit holders equity for the year ended March 31, 2021

		(Rs . In Millions)
	As at March 31, 2021	**As at March 31, 2020**
a. Unit Capital:		
At the beginning of the year	76,582.50	-
Issued during the year	5,105.50	76,582.50
At the end of the year	**81,688.00**	**76,582.50**
B. Other equity		
i) Retained earnings		
At the beginning of the year	(312.75)	-
(loss) for the year	(3,252.48)	(312.75)
Unit issue expenses	(103.82)	
At the end of the year	**(3,669.05)**	**(312.75)**

As per our report of even date attached

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Chinmaya Deval
Partner
Membership No. 148652

Place: Mumbai
Date: 24.05.2021

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary

Place: Mumbai
Date: 24.05.2021

IRB Infrastructure Trust
Consolidated Cash Flow Statement for the year ended March 31, 2021

(Amount in Millions.)

Particulars	For the year ended March 31, 2021	For the year ended March 31, 2020
Cash flow from operating activities		
Profit/(Loss) before tax	**(3,177.62)**	**(318.09)**
Adjustment to reconcile profit before tax to net cash flows:		
Depreciation and amortisation	1,255.69	123.48
Resurfacing expenses	292.88	64.96
Fair value gain on mutual funds	(1.43)	0.38
Net (gain) on sale of current Investment	(13.08)	(0.09)
Finance costs	8,228.17	659.36
Interest income	(82.04)	(9.42)
Gain/(loss) on fair value measurement of other payable	(2.86)	-
Other non operative income	(13.28)	(10.59)
Operating profit before working capital changes	**6,486.41**	**509.99**
Movement in working capital:		
Increase/ (decrease) in trade payables	2,277.55	(315.42)
Increase/ (decrease) in provisions	-	(66.10)
Increase/ (decrease) in other financial liabilities	(2,516.37)	605.03
(Decrease)/ increase in other liabilities	(52.75)	(1,027.58)
Decrease / (increase) in trade receivables	251.88	(351.79)
Decrease / (increase) in inventories	-	0.50
Increase in loans	(4.53)	(0.37)
(Increase) / decrease in other financial assets	(213.15)	78.73
(Increase) / decrease in other assets	1,232.51	171.19
Cash generated from operations	**7,461.55**	**(395.82)**
Taxes paid (net)	14.70	(67.99)
Net cash flows generated from operating activities	**7,476.25**	**(463.81)**
Cash flows from investing activities		
Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development and capital advances	(18,933.90)	(1,204.89)
Repayment of bank loan	-	(30,000.00)
Payment to Sponsor	-	(7,525.40)
Proceeds from sale/ (purchase) of current investments (net)	(557.99)	217.44
Investments/ Redemption in bank deposits (having original maturity of more than three months) (net)	(167.95)	(33.38)
Interest received	75.08	(60.74)
Net cash flows (used in) investing activities	**(19,584.76)**	**(38,606.97)**
Cash flows from financing activities		
Proceeds from non-current borrowings	9,204.86	1,440.96
Repayment of non-current borrowings	(39.62)	-
Proceeds/ (Repayment) of current borrowings (net)	4,155.57	-
Issue of Unit capital #	5,105.50	37,525.40
Unit issue expenses	(103.82)	-
Finance cost paid	(5,990.16)	27.10
Net cash flows generated from financing activities	**12,332.32**	**38,993.46**
Net increase / (decrease) in cash and cash equivalents (A+B+C)	**223.81**	**(77.32)**
Cash and cash equivalents at the beginning of the year	**189.69**	**-**
Cash and cash equivalents at the end of the year	**413.50**	**(77.32)**
Components of cash and cash equivalents		
Balances with scheduled banks:		
- Trust, retention and other escrow accounts	113.94	74.14
- Others	288.60	105.39
Cash on hand	10.96	10.17
	413.50	**189.69**
Less: On acquisition of assets	-	(267.02)
Total cash and cash equivalents	**413.50**	**(77.32)**

IRB Infrastructure Trust
Consolidated Cash Flow Statement for the year ended March 31, 2021

(Amount in Millions.)

Particulars	For the year ended March 31, 2021	For the year ended March 31, 2020
Debt reconciliation statement in accordance with Ind AS 7		
Opening balances		
Long term borrowing	78,815.63	-
Short term borrowing	-	-
Movements		
Cash Flows		
Long term borrowing	9,165.24	1,440.96
Short term borrowing	4,155.57	-
Non-cash changes		
Long term borrowing	2,852.47	77,374.67
Short term borrowing	-	-
Closing balances		
Long term borrowing	90,833.34	78,815.63
Short term borrowing	4,155.57	-

Notes :

1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. The Consolidated cash flow statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows".

Summary of significant accounting policies (refer note 3)
The accompanying notes are an integral part of the Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : L65910MH1998PLC115967

SD/-
Chinmaya Deval
Partner
Membership No. 148652

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Financial Officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date: 24.05.2021

Place: Mumbai
Date: 24.05.2021

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Consolidated statement of net assets at fair value

(Rs. in Millions)

Particulars	As at March 31, 2021		As at March 31, 2020	
	Book value	Fair value	Book value	Fair value
A. Assets	2,22,800.55	2,45,589.10	2,20,076.81	2,15,070.07
B. Liabilities (at book value)	1,42,318.19	1,31,113.67	1,43,807.08	1,17,991.06
C. Net Assets (A-B)	80,482.36	1,14,475.43	76,269.73	97,079.01
D. Number of units (in millions)	816.88	816.88	765.83	765.83
E. NAV (C/D) (Amount in Rs.)	**98.52**	**140.14**	**99.59**	**126.76**

Project wise break up of fair value of total assets:

Name of the project	As at March 31, 2021
IRB Westcoast Tollway Limited (IRBWTL)	25,099.88
Solapur Yedeshi Tollway Limited (SYTL)	20,334.01
Yedeshi Aurangabad Tollway Limited (YATL)	37,779.33
Kaithal Tollway Limited (KTL)	31,593.43
AE Tollway Limited (AETL)	28,459.34
Udaipur Tollway Limited (UTL)	23,777.90
CG Tollway Limited (CGTL)	25,131.76
Kishangarh Gulabpura Tollway Limited (KGTL)	16,827.30
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	36,478.11
Subtotal	**2,45,481.07**
Add : IRB Infrastructure Trust Current Assets	**108.03**
Total assets	**2,45,589.10**

B. Consolidated statement of total returns at fair value :

(Rs. in Millions)

Particulars	For the year ended March 31, 2021	For the year ended March 31, 2020
Total Comprehensive Income (As per the Statement of Profit and Loss)	(3252.48)	(312.75)
Add/Less: other changes in fair value (e.g., in investment property, property, plant & equipment (if cost model is followed)) not recognized in total comprehensive income	33,993.07	20,809.28
Total Return	**30,740.59**	**20,496.53**

Notes :
Fair value of assets as at March 31, 2020 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Chinmaya Deval
Partner
Membership No.: 148652

SD/-
Virendra D.Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Finance officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date: 24.05.2021

Place: Mumbai
Date: 24.05.2021

1 **Corporate Information**

The IRB Infrastructure Trust (the "Fund" / "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under the Registration Act, 1908 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Fund is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Fund is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Fund is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registraion certificate from SEBI on November 25, 2019.

The Fund has been formed to invest in infrastructure assets primarily being in the road sector in India. The Fund's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Fund's portfolio comprise of nine road projects as listed below:-

Project SPV Name**	Residual Concession life*	shareholding	Nature of Investment	Status	Principal Activities	Country of incorporation
IRB Westcoast Tollway Limited (IRBWTL)	20 years 11 Months 1 days	100%	Subsidiary	Tolling and Construction	Construction and operation of road including toll collection.	India
Solapur Yedeshi Tollway Limited (SYTL)	22 years 9 Months 21 days	100%	Subsidiary	Operating		India
Yedeshi Aurangabad Tollway Limited (YATL)	20 years 2 Months 31 days	100%	Subsidiary	Operating		India
Kaithal Tollway Limited (KTL)	21 years 3 Months 14 days	100%	Subsidiary	Operating		India
AE Tollway Limited (AETL)	19 years 4 Months 2 days	100%	Subsidiary	Operating		India
Udaipur Tollway Limited (UTL)	17 years 5 Months 3 days	100%	Subsidiary	Tolling and Construction		India
CG Tollway Limited (CGTL)	16 years 7 Months 4 days	100%	Subsidiary			India
Kishangarh Gulabpura Tollway Limited (KGTL)	16 years 10 Months 21 days	100%	Subsidiary			India
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	20 years 1 Months 25 days	100%	Subsidiary			India

* Represents residual concession life as at March 31, 2021 as per original concession period (without considering extension of concession period, if any).

** Of the above Project SPVs, IRBWTL, SYTL, YATL, AETL, CGTL, UTL and IRBHMTL have been converted to public companies on November 13, 2019 and KTL, KGTL and November 14, 2019 respectively.

2 **Basis of preparation**

Statement of compliance

The Consolidated Financial Statements of Project SPV Group comprises of Consolidated Balance Sheets as at March 31, 2021, Consolidated Statement of Profit and Loss, Consolidated Cash Flow Statement and Consolidated Statement of Changes in Equity for year ended March 31, 2021, and Consolidated Statement of Net Assets at Fair Value as at March 31, 2021 and the Consolidated Statement of Total Return at Fair Value for the year ended March 31, 2021, a summary of significant accounting policies, notes and other explanatory Information.

The Consolidated Financial Statements of the Project SPV Group have been prepared in accordance with Indian Accounting Standards (Ind AS) as per the Companies (Indian Accounting Standards) Rules, 2015 notified under Section 133 of the Act, read with other relevant provisions of the Act.The Consolidated Financial Statements have been prepared on a historical cost basis, except for certain assets and liabilities which have been measured at fair value.

The Consolidated Financial Statements are presented in Rs. in millions, except when otherwise indicated.

Basis of preparation of Consolidated Financial Statements

The Consolidated Financial Statements comprise the financial statements of the Project SPV Group.

Consolidated Financial Statements are prepared using uniform accounting policies for like transactions and other events in similar circumstances.

The financial statements of all Project SPVs used for the purpose of consolidation are drawn up to the same reporting date year ended on March 31.

Consolidation procedure:

(a) Combine like items of assets, liabilities, equity, income, expenses and cash flows of Project SPVs.

(b) Eliminate in full intra Project SPVs assets and liabilities, income, expenses and cash flows relating to transactions between Project SPVs of the Project SPV Group (profits or losses resulting from intra Project SPV Group transactions that are recognised in assets, such as inventory and property, plant and equipment, are eliminated in full). Profit or loss and each component of other comprehensive income (OCI) are attributed to the equity holders of the Project SPV Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance.

3 **Summary of significant accounting policies**

3.01 **Current versus non-current classification**

The Project SPV Group has identified twelve months as its operating cycle. The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents.

The Project SPV Group presents assets and liabilities in the balance sheet based on current/ non-current classification. An asset is treated as current when it is:

- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:

- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Project SPV Group classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

3.02 **Use of estimates and judgements**

The preparation of the Project SPV Group's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future years.

Estimates and assumptions

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the year in which the estimates are revised and future periods are affected.

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below. The Project SPV Group based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

Fair value measurement of financial instruments

Employee benefits

Measurement of employee defined benefit obligations; key actuarial assumptions

Provision for major maintenance

Impairment of non financial assets

3.03 **Fair value measurement**

The Project SPV Group measures financial instruments, (refer note 33) at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the Project SPV Group.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Project SPV Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1 - Quoted (unadjusted) market prices in active markets for identical assets or liabilities

Level 2- Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable

Level 3 -Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Project SPV Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Project SPV Group's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Project SPV Group's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management presents the valuation results to the Audit Committee and the Project SPV Group's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Project SPV Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.

Disclosures for valuation methods, significant estimates and assumptions (note 33)

Financial instruments (including those carried at amortised cost) (note 5,6,7,8,11,12,17,18,19,33)

Quantative disclosure of fair value measurement hierarchy (note 33)

3.04 **Revenue recognition**

The Project SPV Group has applied the following accounting policy for revenue recognition:

Revenue from contracts with customers:

The Project SPV Group recognises revenue from contracts with customers based on a five step model as set out in Ind AS 115:

Step 1. Identify the contract(s) with a customer: A contract is defined as an agreement between two or more parties that creates enforceable rights and obligations and sets out the criteria for every contract that must be met.

Step 2. Identify the performance obligations in the contract: A performance obligation is a promise in a contract with a customer to transfer a good or service to the customer.

Step 3. Determine the transaction price: The transaction price is the amount of consideration to which the Company expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties.

Step 4. Allocate the transaction price to the performance obligations in the contract: For a contract that has more than one performance obligation, the Company will allocate the transaction price to each performance obligation in an amount that depicts the amount of consideration to which the Company expects to be entitled in exchange for satisfying each performance obligation.

Step 5. Recognise revenue when (or as) the entity satisfies a performance obligation.

The Project SPV Group satisfies a performance obligation and recognises revenue over time, if one of the following criteria is met:

1. The customer simultaneously receives and consumes the benefits provided by the Project SPV Group's performance as the Project SPV Group performs; or
2. The Project SPV Group's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or
3. The Project SPV Group's performance does not create an asset with an alternative use to the Project SPV Group and the entity has an enforceable right to payment for performance completed to date.

Contract revenue

Contract revenue associated with the utility shifting incidental to construction of road are recognized as revenue by reference to the stage of completion of the projects at the balance sheet date. The stage of completion of project is determined by the proportion that contract cost incurred for work performed up to the balance sheet date bears to the estimated total contract costs.

Project SPVs operations involve levying of GST on the construction work. Goods and Service tax is not received by the project SPVs on its own account, rather, it is tax collected on value added to the commodity by the seller on behalf of the government. Accordingly, it is excluded from revenue.

Income from the concession arrangements earned under the intangible asset model consists of the (i) fair value of contract revenue, which is deemed to be fair value of consideration transferred to acquire the asset; and (ii) payments actually received from the users. The intangible asset is amortised over its expected useful life in a way that reflects the pattern in which the asset’s economic benefits are consumed by the Project SPV Group, starting from the date when the right to operate starts to be used. Based on these principles, the intangible asset is amortised in line with the actual usage of the specific public utility facility, with a maximum of the duration of the concession.

Financial receivable is recorded at a fair value of guaranteed residual value to be received at the end of the concession period. This receivable is subsequently measured at amortised cost. In the financial assets model, the amount due from the grantor meet the identifiation of the receivable which is measured at fair value. Based on business model assessment, the Project SPV Group measures such financial assets at fair value and subsequently also classifies the same as fair value through profit and loss (“FVTPL”). Any asset carried under concession arrangements is derecognised on disposal or when no future economic benefits are expected from its future use or disposal or when the contractual rights to the financial asset expire.

Income from toll contracts

The income from Toll Contracts on BOT basis are recognised on actual collection of toll revenue (net of revenue share payable to NHAI) as per Concession Agreement. Revenue from electronic toll collection is recognised on accrual basis.

Interest income

For all financial assets measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortised cost of a financial liability. When calculating the effective interest rate, the Project SPV Group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in finance income in the statement of profit and loss.

Dividends

Revenue is recognised when the Project SPV Group's right to receive the payment is established, which is generally when shareholders approve the dividend.

3.05 **Government Grants**

Grants and subsidies from the government are recognised if the following conditions are satisfied.

There is reasonable assurance that the Project SPV Group will comply with the conditions attached to it.

Such benefits are earned and reasonable certainty exists of the collection.

Government grants are recognised in accordance with the terms of the respective grant on accrual basis considering the status of compliance of prescribed conditions and ascertainment that the grant will be received.

Grant received are considered as a part of the total outlay of the construction project and accordingly, the same is reduced from the gross value of assets.

3.06 **Taxes**

Current income tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities in accordance the Income Tax Act, 1961. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the country where the Company operates and generates taxable income.

Current income tax relating to items recognised outside profit or loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction. affects neither the accounting profit nor taxable profit or loss.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity). Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity .

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, are recognised subsequently if new information about facts and circumstances change. Acquired deferred tax benefits recognised within the measurement period reduce goodwill related to that acquisition if they result from new information obtained about facts and circumstances existing at the acquisition date. If the carrying amount of goodwill is zero, any remaining deferred tax benefits are recognised in OCI/ capital reserve depending on the principle explained for bargain purchase gains. All other acquired tax benefits realised are recognised in the consolidated statement of profit and loss. Deferred tax is recognised in consolidated statement of profit and loss on the consolidated adjustments.

Minimum Alternate Tax (MAT)

Minimum Alternate Tax (MAT) paid as per Indian Income Tax Act, 1961 is in the nature of unused tax credit which can be carried forward and utilised when the Project SPV Group will pay normal income tax during the specified period. Deferred tax assets on such tax credit is recognised to the extent that it is probable that the unused tax credit can be utilised in the specified future period. The net amount of tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the balance sheet.

3.07 **Property, plant and equipment**

Property, plant and equipment are stated at cost, less accumulated depreciation and impairment losses if any. Cost comprises the purchase price and any attributable cost of bringing the asset to its working condition for its intended use.Any trade discount or rebates are deducted in arriving at the purchase price.

Depreciation is calculated on written down value method (WDV) using the useful lives as prescribed under the Schedule II to the Companies Act, 2013 or re-assessed by the Project SPV Group based on technical evaluation. The Project SPV Group has estimated the following useful lives for its tangible fixed assets:

Asset class	Useful life	As per Companies Act 2013
Building	30 years	30 years
Plant & Machinery	9 years - 15 years	9 years - 15 years
Office equipment	5 years	5 years
Computers	3 years	3 years
Servers	6 years	6 years
Vehicles	8 years	8 years
Furniture & fixtures	10 years	10 years

3.08 **Intangible assets**

The Project SPV Group exercised first time adoption under Ind AS 101 and has elected to continue with the carrying value of its "Toll Collection Rights" (Intangible Assets) including corresponding obligation, as recognised in the financial statements as at the date of transition April 1, 2016 measured as per the Previous GAAP and uses that as its deemed cost as at date of transition.

Toll collection rights are stated at cost, less accumulated amortisation , impairment losses and grant from government. Cost includes:
a) For acquired Toll Collection Rights - Upfront payments towards acquisition and incidental expenses related thereto.
b) Toll Collection Rights awarded by the grantor against construction service rendered by the Project SPV Group on BOT / DBFOT basis - Direct and indirect expenses on construction of roads, bridges, culverts, infrastructure and other assets at the toll plazas.
c) Toll Collection Rights in lieu of premium - Undiscounted premium obligation over the concession period.

Amortisation

Toll Collection Rights are amortised over the period of concession, using revenue based amortisation as prescribed in Ind As-36. Under this method, the carrying value of the rights is amortised in the proportion of actual toll revenue for the year to projected revenue for the balance toll period, to reflect the pattern in which the assets economic benefits will be consumed. At each balance sheet date, the projected revenue for the balance toll period is reviewed by the management. If there is any change in the projected revenue from previous estimates, the amortisation of toll collection rights is changed prospectively to reflect any changes in the estimates.

Intangible assets under development

Expenditure related to and incurred during implementation of project are included under "Intangible Assets under Development". The same will be transferred to the respective intangible assets on completion of project.

3.09 **Borrowing costs**

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences between the foreign currency borrowing and the functional currency borrowing to the extent regarded as an adjustment to the borrowing costs.

3.10 **Leases**

The determination of whether an arrangement is (or contains) a lease is based on the substance of the arrangement at the inception of the lease. The arrangement is, or contains, a lease if fulfilment of the arrangement is dependent on the use of a specific asset or assets and the arrangement conveys a right to use the asset or assets, even if that right is not explicitly specified in an arrangement.

Project SPV Group as a lessee

A leased asset is depreciated over the useful life of the asset. However, if there is no reasonable certainty that the Project SPV Group will obtain ownership by the end of the lease term, the asset is depreciated over the shorter of the estimated useful life of the asset and the lease term.

A lease is classified at the inception date as a finance lease or an operating lease. A lease that transfers substantially all the risks and rewards incidental to ownership to the Project SPV Group is classified as a finance lease.

Operating lease payments are recognised as an expense in the consolidated statement of profit and loss on a straight-line basis over the lease term.

Ind AS 116 - Leases

Ind AS 116, Leases replaces existing lease accounting guidance i.e. Ind AS 17, Leases. It sets out principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases, except short-term leases and leases for low-value items, under a single on-balance sheet lease accounting model. A lessee recognises a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. Lessor accounting largely unchanged from the existing standard – i.e. lessors continue to classify leases as finance or operating leases.

Based on the preliminary assessment, the Company does not expect any significant impacts on transition to Ind AS 116. This assessment is based on currently available information and may be subject to changes arising from further reasonable and supportable information when the standard will be adopted.

Project SPV Group as a lessor

Leases in which the Project SPV Group does not transfer substantially all the risks and rewards of ownership of an asset are classified as operating leases. Rental income from operating lease is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income.Contingent rents are recognised as revenue in the period in which they are earned.

Leases are classified as finance leases when substantially all of the risks and rewards of ownership transfer from the Project SPV Group to the lessee. Amounts due from lessees under finance leases are recorded as receivables at the Project SPV Group's net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the net investment outstanding in respect of the lease.

3.11 **Inventories**

Inventories are valued as follows:

Construction materials, components, stores, spares and tools

Lower of cost and net realisable value. Cost is determined on weighted average basis and includes all applicable costs in bringing goods to their present location and condition.

Net realisable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

3.12 **Provisions**

Provisions are recognised when the Project SPV Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Project SPV Group expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of profit and loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimates.

3.13 **Resurfacing expenses**

As per the Concession Agreements, the Project SPV Group is obligated to carry out resurfacing of the roads under concession. The Project SPV Group estimates the likely provision required towards resurfacing and accrues the cost on a straight line basis over the period at the end of which resurfacing would be required, in the consolidated statement of profit and loss in accordance with Ind AS 37 "Provisions, Contingent Liabilities and Contingent Assets."

3.14 **Contingent Liability and Contingent assets**

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Project SPV Group or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Project SPV Group does not recognise a contingent liability but discloses its existence in the financial statements.

A contingent assets is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.

Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.15 **Retirement and other employee benefits**

i. Defined contribution plan

Retirement benefits in the form of provident fund, Pension Fund and Employees State Insurance Fund are a defined contribution scheme and the contributions are charged to the Statement of profit and loss for the period when the employee renders related services. There are no other obligations other than the contribution payable to the respective authorities.

ii. Defined benefit plan

Gratuity liability for eligible employees are defined benefit obligation and are provided for on the basis of an actuarial valuation on projected unit credit method made at the end of each financial year. Obligation is measured at the present value of estimated future cash flows using discounted rate that is determined by reference to market yields at the balance sheet date on Government Securities where the currency and terms of the Government Securities are consistent with the currency and estimated terms of the defined benefit obligation.

Remeasurements, comprising of actuarial gains and losses excluding amounts included in net interest on the net defined benefit liability are recognised immediately in the balance sheet with a corresponding debit or credit to retained earnings through OCI in the period in which they occur. Remeasurements are not reclassified to statement of profit and loss in subsequent periods.

Past service costs are recognised in statement of profit and loss on the earlier of:

- The date of the plan amendment or curtailment, and
- The date that the Project SPV Group recognises related restructuring costs

Net interest is calculated by applying the discount rate to the net defined benefit liability or asset. The Project SPV Group recognises the following changes in the net defined benefit obligation as an expense in the statement of profit and loss:

- Service costs comprising current service costs, past-service costs, gains and losses on curtailments and non-routine settlements; and
- Net interest expense or income

iii. Compensated absences

As per the leave encashment policy of the Project SPV Group, the employees have to utilise their eligible leave during the calendar year and lapses at the end of the calendar year. Accrual towards compensated absences at the end of the financial year are based on last salary drawn and outstanding leave absence at the end of the financial year.

3.16 **Financial instruments**

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement

All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through statement of profit and loss, transaction costs that are attributable to the acquisition of the financial asset.

On initial recognistion, a financial asset is classified as measured of
- amortised cost
- FVOCI - Debt instruments
- FVOCI - equity instruments
- FVTPL

Financial assets are not reclassified subsequent to their initial recognition, except if and in the year, the Project SPV Group changes its business model for managing financial assets.

Debt instruments at amortised cost

A 'debt instrument' is measured at the amortised cost if both the following conditions are met:
- The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
- Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance income in the statement of profit and loss. The losses arising from impairment are recognised in the statement of profit and loss.

Debt instrument at FVTOCI

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:
- The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and
- The asset's contractual cash flows represent SPPI.

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the other comprehensive income (OCI). However, the Project SPV Group recognizes interest income, impairment losses and reversals and foreign exchange gain or loss in the statement of profit and loss. On derecognition of the asset, cumulative gain or loss previously recognised in OCI is reclassified from the equity to Statement of profit and loss.Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as at FVTOCI, is classified as at FVTPL.

In addition, the Project SPV Group may elect to designate a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). The Project SPV Group has designated certain debt instrument as at FVTPL.

Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Equity investments

All equity investments in scope of Ind AS 109 are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Project SPV Group may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value. The Project SPV Group makes such election on an instrument-byinstrument basis. The classification is made on initial recognition and is irrevocable.

If the Project SPV Group decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to P&L, even on sale of investment. However, the Project SPV Group may transfer the cumulative gain or loss within equity.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a Project SPV Group of similar financial assets) is primarily derecognised (i.e. removed from the Project SPV Group's consolidated balance sheet) when:

- The rights to receive cash flows from the asset has expired, or
- The Project SPV Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Project SPV Group has transferred substantially all the risks and rewards of the asset, or (b) the Project SPV Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Project SPV Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Project SPV Group continues to recognise the transferred asset to the extent of the Project SPV Group's continuing involvement. In that case, the Project SPV Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Project SPV Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Project SPV Group could be required to repay.

Impairment of financial assets

In accordance with Ind AS 109, the Project SPV Group applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

-Financial assets that are debt instruments, and are measured at amortised cost e.g., loans, debt securities, deposits, trade receivables and bank balance
-Financial assets that are debt instruments and are measured as at FVTOCI
-Lease receivables under Ind AS 17
-Trade receivables or any contractual right to receive cash or another financial asset that result from transactions that are within the scope of Ind AS 18 (referred to as contractual revenue receivables' in these financial statements)

-Loan commitments which are not measured as at FVTPL
-Financial guarantee contracts which are not measured as at FVTPL
The Project SPV Group follows 'simplified approach' for recognition of impairment loss allowance on:
-Trade receivables; and
-Other receivables
The application of simplified approach does not require the Project SPV Group to track changes in credit risk. Rather, it recognises impairment loss allowance based on lifetime ECLs at each reporting date, right from its initial recognition.

For recognition of impairment loss on other financial assets and risk exposure, the Project SPV Group determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the entity reverts to recognising impairment loss allowance based on 12-month ECL.

Lifetime ECL are the expected credit losses resulting from all possible default events over the expected life of a financial instrument. The 12-month ECL is a portion of the lifetime ECL which results from default events that are possible within 12 months after the reporting date.

ECL is the difference between all contractual cash flows that are due to the Project SPV Group in accordance with the contract and all the cash flows that the entity expects to receive (i.e., all cash shortfalls), discounted at the original EIR. When estimating the cash flows, an entity is required to consider:

-All contractual terms of the financial instrument (including prepayment, extension, call and similar options) over the expected life of the financial instrument. However, in rare cases when the expected life of the financial instrument cannot be estimated reliably, then the entity is required to use the remaining contractual term of the financial instrument. -
-Cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms
-Financial assets measured as at amortised cost, contractual revenue receivables and lease receivables: ECL is presented as an allowance, i.e., as an integral part of the measurement of those assets in the balance sheet. The allowance reduces the net carrying amount. Until the asset meets write-off criteria, the Project SPV Group does not reduce impairment allowance from the gross carrying amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through Statement of profit and loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Project SPV Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through Statement of profit and loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through statement of profit and loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Project SPV Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the consolidated statement of profit and loss.

Loans and borrowings

This is the category most relevant to the Project SPV Group. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in statement of profit and loss when the liabilities are derecognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

This category generally applies to borrowings. For more information refer note 17.

Derecognition

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the consolidated statement of profit and loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.17 **Cash and cash equivalents**

Cash and cash equivalent in the balance sheet comprises of cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, as they are considered an integral part of the Project SPV Group's cash management.

3.18 **Cash dividend to unit holders of the Project SPV Group**

The Project SPV Group recognises a liability to make cash or non-cash distributions to unit holders of the parent when the distribution is authorised and the distribution is no longer at the discretion of the Project SPV Group. As per the corporate laws in India, a distribution is authorised when it is approved by the unitholders. A corresponding amount is recognised directly in equity.

3.19 **Impairment of non-financial assets**

The Project SPV Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Project SPV Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset. unless the asset does not generate cash inflows that are largely independent of those from other assets or Project SPV Group's of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

The Project SPV Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Project SPV Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to project future cash flows after the fifth year. To estimate cash flow projections beyond periods covered by the most recent budgets/forecasts, the Project SPV Group extrapolates cash flow projections in the budget using a steady or declining growth rate for subsequent years, unless an increasing rate can be justified. In any case, this growth rate does not exceed the long-term average growth rate for the products, industries, or country or countries in which the entity operates, or for the market in which the asset is used.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognised impairment losses no longer exist or have decreased. If such indication exists, the Project SPV Group estimates the asset's or CGU's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the statement of profit and loss.

Goodwill is tested for impairment annually as at 31 March and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or Project SPV Group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying amount, an impairment loss is recognised. Impairment losses relating to goodwill cannot be reversed in future periods.

Intangible assets with indefinite useful lives are tested for impairment annually as at 31 March at the CGU level, as appropriate, and when circumstances indicate that the carrying value may be impaired.

3.20 **Segment information**

Based on "Management Approach" as defined in Ind AS 108 - Operating Segments, the Management ("the Board of Directors") evaluates the Project SPV Group's performance and allocates the resources based on an analysis of various performance indicators by business segments. Inter segment sales and transfers are reflected at market prices.

Unallocable items includes general corporate income and expense items which are not allocated to any business segment.

Segment Policies:

The Project SPV Group prepares its segment information in conformity with the accounting policies adopted for preparing and presenting the financial statements of the Project SPV Group as a whole. Common allocable costs are allocated to each segment on an appropriate basis.

3.21 **Earnings per Unit**

Basic earnings per unit are calculated by dividing the net profit or loss for the period attributable to equit by the weighted average number of equity shares outstanding during the period. For the purpose of calculating diluted earnings per share, the net profit or loss for the period attributable to equity shareholders and the weighted average number of shares outstanding during the period are adjusted for the effects of all dilutive potential equity shares.

IRB Infrastructure Trust

Notes to Consolidated Financial statement for the year ended March 31, 2021.

Note 4 : Property, Plant and Equipment and Intangible assets

(Amount in Millions.)

	Premises	Computer	Office Equipments	Furniture and Fixture	Total
At 31 March 2020	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Additions on acquisition	-	-	-	-	-
Disposals/ Adjustments	-	-	-	-	
At 31 March 2021	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Depreciation					
At 31 March 2020	**3.55**	**0.26**	**0.98**	**0.21**	**5.00**
Additions	0.55	0.00	0.05	0.03	0.64
Disposals/ Adjustments	-	-	-	-	-
At 31 March 2021	**5.79**	**0.28**	**1.18**	**0.34**	**7.59**
Net Book value					
At 31 March 2021	**10.30**	**0.02**	**0.22**	**0.05**	**10.60**
At 31 March 2020	**12.54**	**0.04**	**0.42**	**0.18**	**13.18**

Net Book value	**March 31, 2021**	**March 31, 2020**
Property, Plant and Equipment	10.60	13.18

Note 4 : Intangible Assets and Intangible Assets under development

Intangible Assets	(Amount in Millions.)
	Toll Collection Rights
At 31 March 2020	**2,02,852.66**
Additions	13,491.76
Deletions	-
Adjustments	-
At 31 March 2021	**2,16,344.42**
Amortisation	
At 31 March 2020	**3,373.68**
Additions	1,253.09
Deletions	-
Adjustments	-
At 31 March 2021	**4,626.78**

Net Book value	**Amount**
At 31 March 2021	**2,11,717.65**
At 31 March 2020	1,99,478.98

Intangible assets under development

Particulars	**At 31 March 2021**
Toll Collection Rights	
At the beginning of the period	13,853.63
Add : development during the year	1,274.74
	15,128.37
Less : Transfer to Intangible Asset (Toll Collection Rights)	10,444.11
Closing balance	**4,684.26**
Total	**4,684.26**

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

(Amount in Millions.)

Particulars	March 31, 2021				March 31, 2020			
	Face Value Rs.	No of Shares / Units	Current	Non-current	Face Value Rs.	No of Shares / Units	Current	Non-current
Financial Assets								
Note 5 : Investment								
i) Investments in Mutual Funds (quoted)								
Fair Value Through Profit or Loss (FVTPL)								
IDBI Liquid Fund - Direct Plan - Growth	10		349.34	-	10		-	-
IDBI Ultra Short term Fund- Direct Growth	10		-	-	10		-	-
ABSL - Liquid Fund -Direct Plan - Growth	10		23.00					
SBI Overnight Fund - Direct Growth	10		157.16					
SBI Liquid Fund - Direct Growth	10		43.00					
			572.50	**-**			**-**	**-**
Total			**572.50**	**-**			**-**	**-**

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

(Amount in Millions.)

	March 31, 2021		March 31, 2020	
	Current	**Non-current**	**Current**	**Non-current**
Note 6 : Trade receivable				
(Unsecured, considered good)				
Others	100.24	-	352.12	-
Total	**100.24**	**-**	**352.12**	**-**

	March 31, 2021		March 31, 2020	
	Current	**Non-current**	**Current**	**Non-current**
Note 7 : Loans				
(Unsecured, considered good)				
Security and other deposits	6.89	2.74	4.63	0.46
Total	**6.89**	**2.74**	**4.63**	**0.46**

	March 31, 2021		March 31, 2020	
	Current	**Non-current**	**Current**	**Non-current**
Note 8 : Other financial assets				
(Unsecured, considered good)				
Interest accrued on fixed deposits	47.57	-	27.32	-
Interest receivable from banks	117.00	-	-	-
Retention money receivable	446.62	-	363.97	-
BG Margin receivable	-	0.54	-	0.54
Receivable from Government Authorities (NHAI)	1.44	-	1.35	0.06
Other receivable	16.47	-	2.99	-
Total	**629.10**	**0.54**	**395.63**	**0.60**

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

(Amount in Millions.)

	March 31, 2021	March 31, 2020
Note 9 : Deferred tax assets/ liabilities (net)		
Deferred tax liabilities :		
Deferred tax liabilities:		
Difference in Depreciation and other differences in block of Property, Plant and equipment and Intangible assets as per tax books & financial books	2,636.80	1,356.50
Total	**2,636.80**	**1,356.50**
Deferred tax assets:		
Depreciation	1,629.65	8.33
MAT credit entitlement	582.82	952.46
Total	**2,212.47**	**960.79**
Deferred tax Assets / liabilities (net)	**424.33**	**395.71**

Note 10 : Other non - current assets		
(Unsecured, considered good)		
Capital advances	0.14	
Total	**0.14**	**-**

Note 11 : Cash and cash equivalents		
Cash and Bank balances		
Balances with banks:		
-on current accounts	288.60	105.39
-on trust, retention and other escrow accounts*	113.94	74.14
Cash on hand	10.96	10.17
Total	**413.49**	**189.70**

Note 12 : Bank balance other than cash and cash equivalent

	March 31, 2021	March 31, 2020
Maturity more than 3 months less than 12 months		
Other deposits	76.09	126.37
Maturity more than 12 months		
Debt service reserve account with banks /earmarked balance	1,668.23	1,450.00
Other deposits	0.03	0.03
Total	**1,744.35**	**1,576.40**

Note 13 : Current tax assets (net)		
Advance income-tax (net of provision for tax)	147.11	207.90
Total	**147.11**	**207.90**

Note 14 : Other current assets		
(Unsecured, considered good unless otherwise stated)		
Advance with suppliers		
- Related parties	1,014.28	2,025.22
- Others	22.05	70.69
Mobilisation advances	610.61	1,170.47
Prepaid expenses	47.68	20.70
Duties and taxes receivable	471.78	111.97
Total	**2,166.40**	**3,399.05**

Note : 15 : Unit capital (Amount in Millions.)

	March 31, 2021	March 31, 2020
Unit capital		
a. Issued, subscribed and fully paid up Unit Capital		
81,68,80,000 units of Rs. 100 each (previous year 76,58,25,000 units)		
At the beginning of the year	76,582.50	-
Issued during the year	5,105.50	76,582.50
At the end of the year	**81,688.00**	**76,582.50**

Note : 16 : Other equity

	March 31, 2021	March 31, 2020
Retained earnings		
At the beginning of the year	(312.75)	-
Profit for the year	(3,252.48)	(312.75)
Unit Issue expenses	(103.82)	-
At the end of the year	**(3,669.05)**	**(312.75)**
Total	**(3,669.05)**	**(312.75)**

(Amount in Millions.)

	March 31, 2021	March 31, 2020
Financial liabilities		
Note : 17 : Borrowings		
Non-current Borrowings		
Term loans		
Indian rupee loan from banks (secured)		
Project loans for SPVs	74,939.04	64,014.66
Less : current maturities expected to be settled within 12 month from balance sheet date	(467.24)	(250.05)
Total (a)	**74,471.80**	**63,764.61**
Indian rupee loan from financial institutions (secured)		
Project loans for SPVs	10,330.67	9,310.82
Less : current maturities expected to be settled within 12 month from balance sheet date	(99.91)	(55.26)
Total (b)	**10,230.76**	**9,255.56**
Non-convertible debentures (secured)	5,563.63	5,490.14
Less : current maturities expected to be settled within 12 month from balance sheet date	(62.15)	(21.47)
Total (c)	**5,501.48**	**5,468.67**
Less: Unamortised transaction cost **(d)**	(1,042.72)	(1,114.71)
Total non current borrowings (e = a + b + c + d)	**89,161.31**	**77,374.13**
Current Borrowings		
Short-term borrowings (secured)		
Current maturity of long term loans		
Indian rupee loan from banks (secured)	467.24	250.05
Indian rupee loan from financial institutions (secured)	99.91	55.26
Non convertible debentures (secured)	62.15	21.47
Unamortised transaction cost		
(Unsecured, repayable on demand and interest free)		
Loan from related parties	4,155.57	-
Total current borrowings (f)	**4,784.87**	**326.78**
less: Amount clubbed under "other current financial liabilities"	629.30	326.78
Net current borrowings	**4,155.57**	**0.00**
Total borrowings (e+f)	**93,946.18**	**77,700.91**

Note : 18 : Trade payables

	March 31, 2021	March 31, 2020
a) Total outstanding dues of micro enterprises and small enterprises	13.18	14.36
b) Total outstanding dues of creditors other than micro and small enterprises	-	
'- Related parties	1,655.04	2,546.50
'- Others	892.03	185.24
Total	**2,560.24**	**2,746.10**

(Amount in Millions.)

	March 31, 2021		March 31, 2020	
	Current	**Non-current**	**Current**	**Non-current**
Note 19 : Other financial liabilities				
Current maturities of non-current borrowings				
Indian rupee loan from banks	467.24	-	250.05	-
Indian rupee loan from fnancial institutions	99.91	-	55.26	-
Non-convertible debentures	62.15	-	21.47	-
Interest accrued but not due on borrowings	-	-	686.46	-
Premium obligation/ Negative grant to NHAI	-	-	78.53	-
Obligation for construction	11,204.52	-	19,392.33	6,423.69
Directors sitting fees payable	0.25	-	0.66	-
Book overdraft	-		-	-
Deposit	1.07	-	1.18	-
Retention money payable	-			
- Related parties	190.34	-	182.84	-
- Others	318.04	3.05	209.32	6.48
Revenue share payable to NHAI	51.97	-	-	-
Employee benefits payable	-	-	-	-
Other payable	-	-	-	-
- Related parties	8,432.67	24,717.75	7,114.74	28,640.61
- Others	-	-	0.01	-
Total	**20,828.17**	**24,720.81**	**27,992.85**	**35,070.78**

	March 31, 2021	March 31, 2020
Note : 20 : Trade payables		
a) Total outstanding dues of micro enterprises and small enterprises small enterprises		
'- Related parties	2463.41	-
'- Others		
	2,463.41	**-**

Note 21 : Provisions

	March 31, 2021		March 31, 2020	
	Current	**Non-current**	**Current**	**Non-current**
Major maintenance expenses		357.84	-	64.96
Total	**-**	**357.84**	**-**	**64.96**

	March 31, 2021	March 31, 2020
Note 22 : Other current liabilities		
Duties and taxes payable	59.05	51.53
Advance from customer- Others	50.73	111.01
Total	**109.78**	**162.54**

(Amount in Millions.)

	For the year ended March 31, 2021	For the month ended March 31, 2020
Note 23 : Revenue from operations		
Contract revenue (road construction)	1,863.70	1,980.20
Income arising out of toll collection (net)	8,549.77	566.94
Revenue share to NHAI- Fastag	(51.97)	-
Total	**10,361.51**	**2,547.14**
Note 24 : Other income		
Interest income on		
- Bank deposits	74.46	9.42
- Others	7.59	-
Profit on sale of investments	13.08	0.09
Fair value gain on mutual funds	1.43	(0.38)
Other non operating income	13.28	10.59
Gain/(loss) on fair value measurement of other payable	2.86	-
Total	**112.71**	**19.72**
Note 25 : Road work and site expenses		
Contract expenses	1,807.12	1,968.98
Operation and maintenance expenses	2,113.67	77.25
Site and other direct expenses	41.03	0.50
Sub-contracting / Security expenses	5.31	0.33
Technical consultancy and supervision charges	16.28	1.38
Total	**3,983.41**	**2,048.44**
Note 26 : Depreciation and amortisation expenses		
Depreciation on property, plant and equipment	2.59	0.31
Amortisation on intangible assets	1,253.09	123.17
Total	**1,255.69**	**123.48**
Note 27 : Finance cost		
Interest expense		
- Banks and financial institutions	8,046.33	642.93
- Unwinding of interest on loan	48.70	4.14
Other borrowing costs	-	
- Amortisation of Transaction cost	78.43	5.61
- Unwinding of discount on provision of MMR	5.47	
- Others	49.24	6.68
Total	**8,228.17**	**659.36**

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

(Amount in Millions.)

	For the year ended March 31, 2021	For the month ended March 31, 2020
Note 28 : Other expenses		
Power and fuel	-	(0.37)
Rent	0.29	0.01
Rates and taxes	15.40	0.54
Travelling and conveyance	-	0.01
Director sitting fees	1.24	0.86
Legal and professional expenses	69.25	0.19
Payment to auditor (including service tax/ GST)	3.88	0.49
Corporate social responsibilities expenditure	31.40	19.00
Miscellaneous expenses	2.43	4.12
Bank charges	3.01	0.25
Repairs and maintenance		
- Plant and machinery	-	0.09
Insurance	11.43	1.56
Total	**138.32**	**26.75**

Note 29 : Commitment and Contingencies

a. Leases
Rent / lease payments under operating lease are recognised as an expense in the Consolidated Statement of profit and loss on a straight line basis over the lease term.

Operating lease

(Amount in millions)

	March 31, 2021	March 31, 2020
a) Future lease rental payments under non-cancellable operating lease are as follows:-		
i) Not later than one year	-	-
ii) Later than one year and not more than five year	-	-
iii) Later than five year	-	-
b) Lease payment recognised in the consolidated statement of profit and loss	0.29	0.01
c) General description of the leasing agreement		
i) Leased assets – accommodation for employees	-	-
ii) Future lease rentals are determined on agreed terms	-	-

b. Capital commitments

	March 31, 2021	March 31, 2020
Estimated value of contracts in capital account remaining to be executed	10,679.14	2,493.29

c. Contingent liabilities
Contingent liabilities not provided for

	March 31, 2021	March 31, 2020
Guarantees given by the Group to suppliers, government bodies and performance guarantee	-	-
For Service Tax, ESIC, Custom Duty, Other Finance expenses and Stamp duty matters	-	-
Total	-	-

The Hon'ble Supreme Court of India ("SC") by their order dated February 28, 2019, in the case of Surya Roshani Limited others v/s EPFO, set out the principles based on which allowances paid to the employees should be identified for inclusion in basic wages for the purposes of computation of Provident Fund contribution. Subsequently, a review petition against this decision has been filed and is pending before the SC for disposal. In view of the management, the liability for the period from date of the SC order to March 31, 2019 is not significant. Further, pending decision on the subject review petition and directions from the EPFO, the impact for the past period, if any, is not ascertainable and consequently no effect has been given in the accounts.

Note 30 : Details of dues to micro and small enterprises as per MSMED Act, 2006

Under the Micro, Small and Medium Enterprises Development Act, 2006 ('MSMED') which came into force from 2 October 2006, certain disclosures are required to be made relating to Micro, Small and Medium enterprises. On the basis or the informntion and records available with the management, there are no overdue amount to the Micro and Small enterprises as defined in the Micro, Small Medium Enterprises Development Act, 2006 as set out in the following disclosures:
The disclosure in respect of the amount payable to enterprises which have provided goods and services to the Group and which qualify under the definition of micro and small enterprises, as defined under Micro, Small and Medium Enterprises Development Act, 2006 has been made in the consolidated financial statement as at March 31, 2020 based on the information received and available with the Group.

Particulars	March 31, 2021	March 31, 2020
Principal amount remaining unpaid to any supplier as at the period end	13.18	14.36
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

Note 31 : Related party disclosures

List of Related parties of the Fund

(i)	Parties to the InvIT	IRB Infrastructure Developers Limited (Sponsor and Project Manager)
		MMK Toll Road Private Limited (Investment Manager)
		IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
(ii)	Associates, Promoters, Directors and Partners of the persons mentioned in clause (i) and (ii)	As per table below

List of associates, promoters, directors and partners of the persons mentioned in clause (i) and (ii)

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manager)**	**MMK Toll Road Private Limited (Investment Manager)**	**IDBI Trusteeship Services Limited (Trustee of IRB Infrastructure Trust)**
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Virendra D. Mhaiskar (HUF)	IRB Infrastructure Developers Limited (IRBIDL)	IDBI Bank Limited LIC Corporation Limited General Insurace Corporation
Directors	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Mukeshlal Gupta Mr. Sudhir Rao Hoshing **Independent Directors** Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Mr. Sunil Tandon Mrs. Heena H. Raja	Mr. Naresh Taneja Mrs. Arati Taskar **Independent Directors** Mr. Darshan Sangurdekar Mr. Omprakash Singh	Mr. Ravishankar G. Shinde Ms. Madhuri J. Kulkarni Ms. Sashikala Muralidharan Mr. Swapan Kumar Bagchi
Associates	**A) Holding Company of Sponsor / Project Manager** Mhaiskar Ventures Private Limited **B) Subsidiary Companies of Sponsor / Project Manager** **Project SPVs** 1. IRB Westcoast Tollway Private Limited (IRB Westcoast) 2. Solapur Yedeshi Tollway Private Limited (SYTPL) 3. Yedeshi Aurangabad Tollway Private Limited (YATPL) 4. Kaithal Tollway Private Limited (KTPL) 5. AE Tollway Private Limited (AETPL) 6. Udaipur Tollway Private Limited (UTPL) 7. CG Tollway Private Limited (CGTPL) 8. Kishangarh Gulabpura Tollway Private Limited (KGTPL) 9. IRB Hapur Muradabad Tollway Private Limited (IRBH) **Others** 1. Ideal Road Builders Private Limited (IRBPL) 2. Mhaiskar Infrastructure Private Limited (MIPL) 3. Modern Road Makers Private Limited (MRMPL) 4. Aryan Toll Road Private Limited (ATRPL) 5. ATR Infrastructure Private Limited (ATRFL) 6. IRB Infrastructure Private Limited (IRBFL) 7. Thane Ghodbunder Toll Road Private Limited (TGTRPL) 8. Aryan Infrastructure Investments Private Limited (AIIPL) 9. NKT Road and Toll Private Limited (NKT) 10. MMK Toll Road Private Limited (MMK) 11. IRB Kolhapur Integrated Road Development Company Private Limited (IRBK) 12. Aryan Hospitality Private Limited (AHPL) 13. IRB Sindhudurg Airport Private Limited (IRBSA) 14. IRB Goa Tollway Private Limited (IRB Goa) 15. IRB PS Highway Private Limited (formerly known as MRM Highways Private Limited) (IRBPS) 16. IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV) 17. MRM Mining Private Limited (Formerly "J J Patel Infrastructural and Engineering Private Limited") (Subsidiary of MRMPL) 18. IRB PP Project Private Limited (formerly known as Zozila Tunnel Project Private Limited) (IRBPP) 19. VK1 Expressway Private Limited (VK1) 20. Modern Estate (Partnership Firm)		

	C) Other Associate Companies of Sponsor / Project Manager 1. Virendra D. Mhaiskar (HUF) 2. VCR Toll Services Private Limited 3. VDM Ventures Private Limited 4. DEUX Farming Films Private Limited 5. IRB Charitable Foundation **Key Managerial personnel of Project SPV Group** (Only with whom Project SPV Group had transactions during the year/ there was balance outstanding at the year end) 1. Mr. Mukeshlal Gupta 2. Mr.Ajay P. Deshmukh 3. Mr.Rajpaul S. Sharma 4. Mr.Dhananjay K. Joshi 5. Mr.Anil D. Yadav 6. Mrs. Kshama Vengsarkar 7. Mr. Rajendra Kumar Agarwal (upto March 30, 2018) 8. Mrs. Arati Taskar 9. Mr. Sudhir Rao Hoshing 10. Mr. Naresh Taneja 11. Mr. Darshan Sangurdekar 12. Mr. Omprakash Singh 13. Jitendra Sharma 14 Mrs. Heena Raja 15 Miss Shilpa Todankar

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

I. Related Party Transactions (Amount in millions)

Sr. No.	Particulars	Sponsor and Project Manager	Fellow subsidaries of Project SPV Group	Key Management Personnel of Project SPV Group	Sponsor and Project Manager	Fellow subsidaries of Project SPV Group	Key Management Personnel of Project SPV Group
		March 31, 2021			March 31, 2020		
1	**Contract Expenses**	**-**	**921.31**	**-**	**1,695.27**	**1,452.39**	**-**
	IRB Infrastructure Developers Limited	-	-	-	1,695.27	-	-
	Modern Road Makers Private Limited	-	921.31	-	-	1,452.39	-
2	**Material Aggregate Purchase**	**-**	**2,062.51**	**-**	**-**	**-**	**-**
	Modern Road Makers Private Limited	-	2,062.51	-	-	-	-
3	**Operation & Main. Expenses**	**1,826.29**	**-**	-	**119.47**	**-**	-
	IRB Infrastructure Developers Limited	1,826.29	-	-	119.47	-	-
4	**Finance Cost -Interest unwinding on loan**	**-**	**-**	-	**44.70**	**-**	-
	Mhaiskar Infrastructure Private Limited	-	-	-	44.70	-	-
5	**Share application money received**	**2,603.81**	**-**	**-**	**1,182.32**	**-**	**-**
	IRB Infrastructure Developers Limited	2,603.81	-	-	1,182.32	-	-
6	**Allotment of Equity Share**	**2,603.81**	**-**	**-**	**1,648.82**	**-**	**-**
	IRB Infrastructure Developers Limited	2,603.81	-	-	1,648.82	-	-
7	**Amount Held up**	-	**7.51**	**-**	**-**	**-**	**-**
	Modern Road Makers Private Limited	-	7.51	-	-	-	-
8	**Expenses incurred on behalf of us**	**5.71**	**6.05**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	5.71	-	-	-	-	-
	Modern Road Makers Private Limited	-	6.05	-	-	-	-
9	**Sub-ordinate debts (Unsecured & interest free)**	**-**	**-**	**-**	**2,924.28**	**-**	**-**
	IRB Infrastructure Developers Limited	-	-	-	2,924.28	-	-
10	**Short-term borrowings taken (unsecured)**	**477.81**	**-**	**-**	**13,418.70**	**-**	**-**
	IRB Infrastructure Developers Limited	477.81	-	-	13,418.70	-	-
11	**Short-term borrowings repayment**	**-**	**-**	**-**	**562.49**	**-**	**-**
	IRB Infrastructure Developers Limited	-	-	-	562.49	-	-
12	**Mobilisation advances recovered**	**1,672.70**	**-**	**-**	**2,348.12**	**-**	**-**
	IRB Infrastructure Developers Limited	1,672.70	-	-	2,348.12	-	-
13	**Additional advances recovered**	**-**	**-**	**-**	**55.21**	**-**	**-**
	IRB Infrastructure Developers Limited	-	-	-	55.21	-	-
14	**Advance given including BG margin given**	**208.50**	**75.42**	**-**	**41.37**	**-**	**-**
	IRB Infrastructure Developers Limited	208.50	-	-	41.37	-	-
	Modern Road Makers Private Limited		75.42				
15	**General advance recovered - EPC**	**183.71**	**75.42**	**-**	**900.56**	**-**	**-**
	IRB Infrastructure Developers Limited	183.71	-	-	900.56	-	-
	Modern Road Makers Private Limited	-	75.42	-	-	-	-
16	**Construction Cost**	**13,535.60**	**2,194.10**	**-**	**24,920.09**	**2,080.00**	**-**
	IRB Infrastructure Developers Limited	13,535.60	-	-	24,920.09	-	-
	Modern Road Makers Private Limited	-	2,194.10	-	-	2,080.00	-

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

I. Related Party Transactions (Amount in millions)

Sr. No.	Particulars	Sponsor and Project Manager	Fellow subsidaries of Project SPV Group	Key Management Personnel of Project SPV Group	Sponsor and Project Manager	Fellow subsidaries of Project SPV Group	Key Management Personnel of Project SPV Group
		March 31, 2021			March 31, 2020		
17	**BG Margin Receivable**	**-**	**-**	**-**	**36.21**	**-**	**-**
	IRB Infrastructure Developers Limited	-	-	-	36.21	-	-
18	**Other Payable**	**2,444.14**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	2,444.14	-	-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	-	-	-	-	-
19	**Unsecured Loan payable**	**3,677.76**	**48.71**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	3,677.76	-	-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	48.71	-	-	-	-
20	**Unsecured Loan / other payable repaid**	**5,105.50**	**1.17**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	5,105.50	-	-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	1.17	-	-	-	-
21	**Other Payable**	**9.73**	**-**	**-**	**35,573.69**	**-**	**-**
	IRB Infrastructure Developers Limited	3.88	-	-	32,037.96	-	-
	Modern Road Makers Private Limited	5.85	-	-	1,785.30	-	-
	IRB Goa Tollway Private Limited	-	-	-	1,544.86	-	-
	Mhaiskar Infrastrcture Private Limited	-	-	-	205.57	-	-
22	**Director sitting fees paid**	-	-	**1.23**	-	-	**1.83**
	Mr. Mukeshlal Gupta	-	-	-	-	-	0.16
	Mr. Dhananjay K. Joshi	-	-	-	-	-	0.11
	Mr. Ajay P. Deshmukh	-	-	-	-	-	0.22
	Mr. Naresh Taneja	-	-	-	-	-	0.11
	Mrs. Arati Taskar	-	-	-	-	-	0.16
	D.S. Sangurdekar	-	-	0.17	-	-	0.19
	O. P. Singh	-	-	0.18	-	-	0.20
	Sudhir Hoshing	-	-	-	-	-	0.23
	Jitendra Sharma	-	-	0.37	-	-	0.05
	Mr Anil Yadav	-	-	-	-	-	0.12
	Kshama Vengsarkar	-	-	-	-	-	0.17
	Heena Raja	-	-	0.08	-	-	-
	C S Kaptan	-	-	0.24	-	-	-
	Mr.R.S. Sharma	-	-	-	-	-	0.11
	Shilpa Todankar	-	-	0.19	-	-	-

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

II. Related party balances

(Amount in millions)

Sr. No.	Particulars	Sponsor and Project Manager	Fellow subsidaries of Project SPV Group	Key Management Personnel of Project SPV Group	Sponsor and Project Manager	Fellow subsidaries of Project SPV Group	Key Management Personnel of Project SPV Group
		March 31, 2021			March 31, 2020		
1	**Trade payable**	**1,119.15**	**468.44**	**-**	**2,214.88**	**331.62**	**-**
	IRB Infrastructure Developers Limited	1,119.15	-	-	2,214.88	-	-
	Modern Road Makers Private Limited	-	468.44	-	-	331.62	-
2	**Trade payable (non-current)**	**-**	**2,463.41**	**-**	**-**	**-**	**-**
	Modern Road Makers Private Limited	-	2,463.41	-	-	-	-
3	**Mobilisation Advances**	**1,522.77**	**-**	**-**	**1,170.47**	**-**	**-**
	IRB Infrastructure Developers Limited	1,522.77	-	-	1,170.47	-	-
4	**Advance given**	**102.14**	**-**	**-**	**2,025.00**	**1.39**	**-**
	IRB Infrastructure Developers Limited	102.14	-	-	2,025.00	-	-
	Modern Road Makers Private Limited	-		-	-	1.39	-
5	**Retention Payable**	**-**	**190.35**	**-**	**-**	**182.85**	**-**
	Modern Road Makers Private Limited	-	190.35	-	-	182.85	-
6	**Other payable including BG margin payable**	**29,550.45**	**3,599.97**	**-**	**32,208.96**	**3,546.38**	**-**
	IRB Infrastructure Developers Limited	29,550.45	-	-	32,208.96	-	-
	Modern Road Makers Private Limited	-	1,800.83	-	-	1,795.95	-
	IRB Goa Tollway Private Limited	-	1,544.86	-	-	1,544.86	-
	Mhaiskar Infrastructure Private Limited	-	254.28	-	-	205.57	-
7	**BG Margin Money Receivable**	**0.54**	**-**	**-**	**0.54**	**-**	**-**
	IRB Infrastructure Developers Limited	0.54	-	-	0.54	-	-
8	**Unsecured Loan / other payable**	**4,155.57**	-	-	-	-	-
	IRB Infrastructure Developers Limited	4,155.57	-	-	-	-	-
9	**Trade Receivable**	-	**0.51**	-	-	-	-
	Modern Road Makers Private Limited	-	0.51	-	-	-	-
10	**Director sitting fees Payable**	**-**	**-**	**0.28**	**-**	**-**	**0.65**
	Mr. Mukeshlal Gupta	-	-	-	-	-	0.06
	Mr. Dhananjay K. Joshi	-	-	-	-	-	0.04
	Mr. Ajay P. Deshmukh	-	-	-	-	-	0.08
	Mr. Rajendra kumar Agarwal	-	-	-	-	-	0.01
	Mrs. Arati Taskar	-	-	-	-	-	0.06
	D.S. Sangurdekar	-	-	0.04	-	-	0.08
	O.P. singh	-	-	0.04	-	-	0.06
	Sudhir Hoshing	-	-		-	-	0.08
	Jitendra Sharma	-	-	0.09	-	-	0.02
	R.S. Sharma	-	-		-	-	0.04
	Kshama Vengsarkar	-	-		-	-	0.06
	Heena Raja	-	-	0.02	-	-	-
	Shilpa Todankar	-	-	0.01	-	-	-
	C S Kaptan	-	-	0.08	-	-	-
	Naresh Taneja	-	-	-	-	-	0.02
	Anil Yadav	-	-	-	-	-	0.04

Note 32 : Disclosure pursuant to Appendix - A to Ind AS 11 - " Service Concession Arrangements" ('SCA')

(A) Disclosures with regard to Toll Collection Rights (Intangible Assets)

Sr. No.	Name of Concessionaire	Start of concession period under concession agreement (Appointed date)	End of concession period under concession agreement	Period of concession since the appointed date	Construction completion date or scheduled construction completion date under the concession agreement, as applicable
1	IRB Westcoast Tollway Limited	March 3, 2014	March 2, 2042	28 years	December 1, 2020
2	Solapur Yedeshi Tollway Limited	January 21, 2015	January 20, 2043	29 years	July 1, 2019
3	Yedeshi Aurangabad Tollway Limited	July 1, 2015	June 30, 2041	26 years	August 31, 2020
4	Kaithal Tollway Limited	July 15, 2015	July 14, 2042	27 years	July 9, 2018
5	AE Tollway Limited	August 1, 2016	July 31, 2040	24 years	August 31, 2020
6	Udaipur Tollway Limited	September 3, 2017	September 2, 2038	21 years from Appointed Date	August 31, 2020
7	CG Tollway Limited	November 4, 2017	November 3, 2037	20 years from Appointed Date	July 1, 2020
8	Kishangarh Gulabpura Tollway Limited	February 21, 2018	February 20, 2038	20 years from Appointed Date	October 31, 2020
9	IRB Hapur Moradabad Tollway Limited	May 28, 2019	May 26, 2041	22 years from Appointed Date	November 30, 2021

Note:
The above BOT/ DBFOT projects shall have following rights/ obligations in accordance with the Concession Agreement entered into with the Respective Government Authorities:-

a. Rights to use the Specified assets
b. Obligations to provide or rights to expect provision of services
c. Obligations to deliver or rights to receive at the end of the Concession.

Note 33 : Fair Values

The carrying values of financials instruments of the Group are reasonable and approximations of fair values.

	Carrying amount	Fair Value	Carrying amount	Fair Value
	March 31, 2021		March 31, 2020	
Financial assets				
Financial assets measured at amortised cost				
Loans	9.63	4.30	5.09	5.09
Other Financial assets	629.64	629.64	396.23	396.23
Financial assets measured at amortised				
Trade receivable	100.24	100.24	352.12	352.12
Cash and cash equivalents	413.49	413.49	189.70	189.70
Other Bank balances	1,744.35	1,744.35	1,576.40	1,576.40
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	2,560.24	2,560.24	2,746.10	2,746.10
Borrowings	93,946.18	93,946.18	77,700.92	77,700.92
Other financial liabilities	44,919.68	44,919.68	62,736.84	62,736.84
Financial liabilities				
Financial liabilities measured at FVTPL				
Trade payables	2,463.41	2,463.41	-	-

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the Group has determined that market participants would take into account when pricing the investments.

Note 34 : Financial risk management objectives and policies
The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities.

The Board of Directors have overall responsibility for the establishment and oversight of the Group's risk management framework.

In performing its operating, investing and financing activities, the Group is exposed to the Credit risk, Liquidity risk and Currency risk.

Market Risk
Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits, FVTOCI investments and derivative financial instruments.

Credit Risk on financial assets

Credit risk is the risk that counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Company is exposed to credit risk from its operating activities (primarily trade receivables) and from its financing activities, including deposits with banks and financial institutions, foreign exchange transactions and other financial instruments.

Financial instruments

Credit risk from balances with banks, trade receivables, loans and advances and financial institutions is managed by the Group's management in accordance with the Group's policy. Investments of surplus funds are made only with approved counterparties and within credit limits assigned to each counterparty. Counterparty credit limits are reviewed by the top management on an annual basis, and may be updated throughout the year subject to approval of the Company's board of directors. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through counterparty's potential failure to make payments.

Trade receivables and Loans and Advances

Customer credit risk and Loans and advances is managed by each business unit subject to the Group’s established policy, procedures and control relating to customer credit risk management. An impairment analysis is performed at each reporting date on an individual basis for major trade receivables and loan and advances. The Group has not identifed any impairment loss as at , March 31, 2021.

Other financial assets

Credit risk from balances with banks and financial institutions is managed by the Group in accordance with the Group’s policy. Investments of surplus funds are made only in highly marketable debt instruments with appropriate maturities to optimise the cash return on instruments while ensuring sufficient liquidity to meet its liabilities.

Interest Rate Risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group’s exposure to the risk of changes in market interest rates relates primarily to the Group’s long-term debt obligations with floating interest rates.

The Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate borrowings.

Interest rate sensitivity

The following table demonstrates the sensitivity to a reasonably possible change in interest rates on that portion of loans and borrowings affected, after excluding the credit exposure on fixed rate borrowing. With all other variables held constant, the Group's profit before tax is affected through the impact on floating rate borrowings, as follows:

	Borrowings	**Fixed Deposits**	**Borrowings**	**Fixed Deposits**
Balance of Fixed Deposit and Borrowings	**March 31, 2021**		**March 31, 2020**	
- INR Millions	90,833.34	1,744.35	78,815.63	1,576.39
- USD Millions	-	-	-	-
Increase in basis points				
- INR	50 bps	50 bps	50 bps	50 bps
- USD	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax				
- INR Millions	(454.17)	(8.72)	(394.08)	(7.88)
- USD Millions	-	-	-	-
Decrease in basis points				
- INR	50 bps	50 bps	50 bps	50 bps
- USD	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax				
- INR Millions	454.17	8.72	394.08	7.88
- USD Millions	-	-	-	-

Liquidity risk

Liquidity risk is the risk that the Group may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Group's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements. The Group closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt and overdraft from banks at an optimised cost.

The table below summarises the maturity profile of the Group's financial liabilities based on contractual undiscounted payments:

As at March 31, 2021	**Carrying amt**	**Total**	**On Demand**	**Less than 1 year**	**1 to 5 years**	**> 5 years**
Borrowings	93,946.18	93,946.19	219.09	4,307.07	11,203.11	78,216.92
Other financial liabilities	44,919.68	44,919.67	-	20,198.87	24,720.80	-
Trade payables	5,023.65	5,023.65	-	2,560.23	2,463.41	-
Total	**1,43,889.51**	**1,43,889.51**	**219.09**	**27,066.16**	**38,387.32**	**78,216.92**

As at March 31, 2020	**Carrying amt**	**Total**	**On Demand**	**Less than 1 year**	**1 to 5 years**	**> 5 years**
Borrowings	77,700.92	77,700.92		326.79	19,109.50	58,264.63
Other financial liabilities	62,736.84	62,736.83		27,666.05	34,950.62	120.16
Trade payables	2,746.10	2,746.10	-	2,746.10	-	-
Total	**1,43,183.86**	**1,43,183.85**	**-**	**30,738.94**	**54,060.12**	**58,384.79**

At present, the Group does expects to repay all liabilities at their contractual maturity. In order to meet such cash commitments, the operating activity is expected to generate sufficient cash inflows.

Borrowings are considered post transaction cost.

Note 35 : COVID-19

The outbreak of Coronavirus (COVID-19) pandemic globally and in India is causing significant disturbance and slowdown of economic activity. As per the directions of the Ministry of Road Transport & Highways (MoRTH)/ National Highway Authority of India (NHAI), in order to follow MHA guidelines about commercial and private establishment in the wake of COVID-19 epidemic in the country, operations at the toll plaza of the Group were closed down w.e.f. 26th March, 2020. The toll operations were resumed from 20th April, 2020 by ensuring compliance with preventive measures in terms of guidelines/ instructions issue by Govt. of India to contain spread of Covid -19. Due to this, traffic for the toll road has been impacted. Management believes this is temporary and expects traffic will be normalised looking at the recent toll collection. In accordance with the Concession Agreement and NHAI policy no. 8.3.33/2020 and 8.4.20/2020 dated 26th May, 2020, the Group is eligible for extension of concession period with NHAI towards loss of revenue due to COVID-19 pandemic and NHAI is also extending COVID-19 loan to the Concessionaire for shortfall in cashflow.

The management has assessed and determined that considering the nature of its operations and overall revenue model, COVID-19 does not have material impact on the Group's financial position as at March 31, 2021 and its financial performance for the year then ended.

Note 36 : Royalty Claim

The Group has received claim amount raised on National Highways Authority of India (NHAI) under Change in law on account of increase in royalty rates to the tune of Rs. 1139.28 millions during the year ended March 31, 2020. NHAI has released the claim amount subject to final decision of Nine judges bench of Hon'ble Supreme Court of India due to whcih it was not taken to income earlier. Further, Group has obtained a legal opinion and has recognised the said claim amount in the Statement of profit and loss in the month of March, 2020.

Note 37 : Capital management

Capital includes equity attributable to the equity holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise shareholder value. The Group manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the Project SPV Group may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the year ended March 31, 2021.

The Group monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

	March 31, 2021	**March 31, 2020**
Borrowings	**93,946.18**	**77,700.92**
Trade payables	**5,023.65**	**2,746.10**
Other financial liabilities	**44,919.68**	**62,736.84**
Less: cash and cash equivalents	(413.49)	(189.70)
Net debt	**1,43,476.02**	**1,42,994.16**
Equity	**78,018.95**	**76,269.75**
Total equity	**78,018.95**	**76,269.75**
Capital and net debt	**2,21,494.97**	**2,19,263.91**
Gearing ratio (%)	**64.78%**	**65.22%**

In order to achieve this overall objective, the Group's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period.

Note 38

(a) During the year ended March 31, 2021, the Group has paid/accrued Rs. 875.53 millions as Revenue Share to National Highways Authority of India ("NHAI") out of its toll collection in accordance with the Concession Agreements entered with NHAI. Income from Operations in the financials for the above periods is net off the above Revenue Share to NHAI.

(b) During the year ended March 31, 2017, AE Tollway Limited (AETL) has entered into a Concession agreement (CA) with NHAI for a period of 24 years. As per the terms of the CA, AETPL has agreed to pay a premium in the form of "Additional Concession Fee" equal to Rs. 810.00 millions for the first year and each subsequent year such premium shall be determined by increasing the amount of premium in the respective year by an additional 5% as compared to the immediately preceding year. Management based on the legal opinion obtained and their evaluations of the terms of the CA, believes that such premium payable is restricted to the toll collection during the year and is in the form of revenue sharing arrangement. Accordingly, the premium payable for the year is accounted for as revenue share.

Note 39: Grant from Government Authorities

As per Article 25 of the respective Concession Agreement with the National Highways Authority of India ('NHAI' or 'the Grantor'), the Concessionaires are entitled to receive Grant for meeting the part of the project cost subject to the conditions laid down in the concession agreement. The details are as under:

(Rs in millions)

Name of the Company	Eligible for Grant	Grant received in FY 2016-17	Grant received in FY 2017-18	Grant received in FY 2018-19	Grant yet to be received
SYTL	1,890.00	1,391.70	403.80	**94.50**	-
KTL	2,340.00	1,533.79	806.21	**-**	-
YATL	5,580.00	-	4,230.24	**1,349.76**	-
IRBWT	5,362.20	4,512.30	-	**849.90**	-
Total	**15,172.20**	**7,437.79**	**5,440.25**	**2,294.16**	**-**

Note 40: Information on segment reporting pursuant to Ind AS 108 - Operating Segments

The Project SPV Group has identified business segment in accordance with Indian Accounting Standard 108 "Operating Segment" notified under section 133 of the Companies Act 2013, read together with relevant rules issued thereunder. The Group has identified Built, Operate and Transfer ('BOT') as its single reportable segment. Moreover the Group's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

Note 41: Earnings Per Unit (EPU)

EPU amounts are calculated by dividing the profit for the period attributable to unit holders by the weighted average number of Units outstanding during the year/period.

The following reflects the income and share data used in the EPU computations:

	March 31, 2021	March 31, 2020
Profit attributable to unit holders for earnings	(3,252.48)	(312.75)
Weighted average number of Units for EPU	78,47,08,356	7,55,33,425
Face value per unit (in Rs)	100	100
Earning per unit (in Rs.)	(4.14)	(4.14)

Information on segment reporting pursuant to Ind AS 108 - Operating Segments

Note 42: Information on segment reporting pursuant to Ind AS 108 - Operating Segments
The Project SPV Group has identified business segment in accordance with Indian Accounting Standard 108 "Operating Segment" notified under section 133 of the Companies Act 2013, read together with relevant rules issued thereunder. The Group has identified Built, Operate and Transfer ('BOT') as its single reportable segment. Moreover the Group's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

Note 43: Earnings Per Unit (EPU)

The number of units that IRB Infrastructure Trust will issue to investors in the proposed private placement and to IRB Infrastructure Developers Limimted (referred to as 'the Sponsors') in exchange of the shareholdings in the Project SPV Group and against the loan from Sponsors is not presently ascertainable. Hence the disclosures in respect of Earnings per Unit have not been given.

Note 44 : Previous year comparatives
Consequent to the issuance of " Guidance Note on Division II – Ind AS Schedule III to the Companies Act, 2013" certain items of financial statements have been regouped/ reclassified.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Chinmaya Deval
Partner
Membership No. 148652

Place: Mumbai
Date: 24.05.2021

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : L65910MH1998PLC115967

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Financial Officer

SD/-
Kaustubh Shevade
Company secretary

Place : Mumbai
Date: 24.05.2021

B. STANDALONE FINANCIAL STATEMENTS

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Gokhale & Sathe
Chartered Accountants
304/308/309, Udyog Mandir No.1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016.
Telephone + 91 (22) 43484242
Fax + 91 (22) 43484241

M S K A & Associates
Chartered Accountants
602, Floor 6, Raheja Titanium
Western Express Highway,
Geetanjali Railway Colony,
Ram Nagar, Goregaon (E),
Mumbai 400063, India
Tel: +91 22 6238 0519

Independent Auditors' Review Report on Unaudited Condensed Interim Standalone Financial Statements for the nine months period ended December 31, 2023 of IRB Infrastructure Trust

To
The Board of Directors,
MMK Toll Roads Private Limited
The Investment manager of the IRB Infrastructure Trust ("the Investment Manager")

1. We have jointly reviewed the accompanying Unaudited Condensed Interim Standalone Financial Statements of IRB Infrastructure Trust ("the Trust") which comprises Condensed Interim Standalone Balance Sheet as on December 31, 2023, Unaudited Condensed Interim Standalone Statement of Profit and Loss, including other comprehensive income, Unaudited Condensed Interim Standalone Statement of Net Assets at Fair Value, Unaudited Condensed Interim Standalone Statement of Total returns at Fair Value, Unaudited Condensed Interim Standalone Cash Flow Statement and Unaudited Condensed Interim Standalone Statement of Changes in Unitholders Equity for the nine months period then ended and a summary of select explanatory notes (together hereinafter referred to as the "Unaudited Condensed Interim Standalone Financial Statements"). "These unaudited condensed interim standalone financial statements for the period from April 01, 2023 to December 31, 2023 have been prepared solely for inclusion in the Letter of Offer ("LOF") in connection with the proposed right issue of units of the Trust.

2. The Unaudited Condensed Interim Standalone Financial Statements, which is the responsibility of the Investment Manager and approved by the Investment Manager's Board of Directors, has been prepared in accordance with the requirements of SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time read with the Paragraph 3.23 of Chapter 3 of the Securities and Exchange Board of India ("SEBI") Master Circular No. SEBI/HO/DDHS-PoD-2/P/CIR/2023/115 dated July 06, 2023, as amended ("SEBI Circular"), together known as ("InvIT Regulations"), and recognition and measurement principles laid down in Indian Accounting Standard 34, Interim Financial Reporting ('Ind AS 34') prescribed under rule 2(1)(a) of Companies (Indian Accounting Standards) Rules 2015, as amended and other recognised accounting principles generally accepted in India, to the extent not inconsistent with the InvIT Regulations.

3. We conducted our review of the Unaudited Condensed Interim Standalone Financial Statements in accordance with the Standard on Review Engagements (SRE) 2410 "Review of Interim Financial Information Performed by the Independent Auditor of the Entity" issued by the Institute of Chartered Accountants of India. A review consists of making inquiries, primarily of Investment Manager's personnel responsible for financial and accounting matters and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Standards on Auditing and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

4. Based on our review conducted and procedures performed as stated in paragraph 3 above, nothing has come to our attention that causes us to believe that the accompanying Unaudited Condensed Interim Standalone Financial Statements, prepared in accordance with the recognition and measurement principles laid down in Ind AS 34 prescribed under prescribed under rule 2(1)(a) of Companies (Indian Accounting Standards) Rules 2015, as amended and other recognised accounting principles generally accepted in India, to the extent not inconsistent with the InvIT Regulations, has not disclosed the information required to be disclosed in terms of Regulation 23 of the SEBI (Infrastructure Investment Trusts) Regulation, 2014, as amended, read with SEBI circular, including the manner in which it is to be disclosed, or that it contains any material misstatement.

Gokhale & Sathe
Chartered Accountants
304/308/309, Udyog Mandir No.1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016.
Telephone + 91 (22) 43484242
Fax + 91 (22) 43484241

M S K A & Associates
Chartered Accountants
602, Floor 6, Raheja Titanium
Western Express Highway,
Geetanjali Railway Colony,
Ram Nagar, Goregaon (E),
Mumbai 400063, India
Tel: +91 22 6238 0519

5. We draw attention to Note 8 of the accompanying Unaudited Condensed Interim Standalone Financial Statements, which describes the presentation of 'Unit Capital' as 'Equity' to comply with the InvIT Regulations.

   Our conclusion is not modified in respect of this matter.

6. The Unaudited Condensed Interim Standalone Financial Statements of the Trust for the period April 01, 2022 to December 31, 2022 included in the Unaudited Condensed Interim Standalone Financial Statements, were reviewed by Gokhale & Sathe, one of the Joint Auditor of the Trust, whose report dated March 08, 2024 expressed an unmodified conclusion of those Unaudited Condensed Interim Standalone Financial Statements.

   M S K A & Associates conclusion is not modified in respect of the above matter.

7. The standalone financial information for the year ended March 31, 2023, included in the Unaudited Condensed Interim Standalone Financial Statements, are from the standalone financial statements of the Trust, which were audited by Gokhale & Sathe, one of the Joint Statutory Auditors of the Trust, whose report dated May 12, 2023 expressed an unmodified opinion of those audited standalone financial statements.

   M S K A & Associates conclusion is not modified in respect of this matter.

8. The report is addressed to the Board of Directors of the Investment Manager and submitted solely for inclusion in the LOF in connection with the proposed right issue of units of the Trust.

   Accordingly, we do not accept or assume any liability or any duty of care for any other purpose or to any other person to whom this report is shown or into whose hands it may come without our prior consent in writing.

   Our conclusion is not modified in respect of this matter.

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration No.103264W

SD /-

CA Kaustubh Deshpande
Partner
Membership No.: 121011
UDIN:24121011BKAALO6929

Place: Mumbai
Date: March 08, 2024

For M S K A & Associates
Chartered Accountants
ICAI Firm Registration No.105047W

SD /-

Nitin Tiwari
Partner
Membership No.: 118894
UDIN: 24118894BKGQGO4011

Place: Mumbai
Date: March 08, 2024

IRB Infrastructure Trust
Condensed Interim Standalone Balance Sheet as at December 31, 2023

(Rs. in million)

		Note No.	As at December 31, 2023 (Unaudited)	As at March 31, 2023 (Audited)
I	**ASSETS**			
(1)	**Non-current assets**			
	Financial assets	4		
	i) Investments	4.1	44,794.18	94,424.44
	ii) Loans	4.2	1,55,666.85	30,351.69
	iii) Other financial assets	4.3	30.95	-
	Total non-current assets		**2,00,491.98**	**1,24,776.13**
(2)	**Current assets**			
	Financial assets	5		
	i) Investments	5.1	5,737.32	20.08
	ii) Cash and cash equivalents	5.2	28.55	6.56
	iii) Bank balance other than (ii) above	5.3	2,532.30	-
	iv) Loans	5.4	7,327.61	5,421.29
	v) Other financial assets	5.5	17,175.64	7,965.17
	Current tax assets (net)	6	0.80	-
	Other current assets	7	0.29	4.48
	Total current assets		**32,802.51**	**13,417.58**
	TOTAL ASSETS		**2,33,294.49**	**1,38,193.71**
II	**EQUITY AND LIABILITIES**			
	Equity			
	Unit capital	8	1,15,445.40	87,929.33
	Other equity	9	17,674.36	9,526.42
	Total unit holder's equity		**1,33,119.76**	**97,455.75**
(1)	**Non-current liabilities**			
	Financial liabilities	10		
	i) Borrowings	10.1	61,777.70	-
	ii Other financial liabilities	10.2	37,489.82	35,778.03
	Total non- current liabilities		**99,267.52**	**35,778.03**
(2)	**Current liabilities**			
	Financial liabilities	11		
	i) Borrowings	11.1	802.00	4,872.91
	ii Trade payables	11.2		
	a) total outstanding dues of micro enterprises and small enterprises		-	0.01
	b) total outstanding dues of creditors other than micro enterprises and small enterprises		101.81	81.34
	Other Current liabilities	12	3.40	5.67
	Total current liabilities		**907.21**	**4,959.93**
	Total liabilities		**1,00,174.73**	**40,737.96**
	TOTAL EQUITY AND LIABILITIES		**2,33,294.49**	**1,38,193.71**

The summary of selected explanatory notes forms an integral part of the Unaudited Condensed Interim Standalone Financial Statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : March 08, 2024

Place : Mumbai
Date : March 08, 2024

IRB Infrastructure Trust

Unaudited Condensed Interim Standalone Statement of Profit and Loss for the period April 1, 2023 to December 31, 2023

(Rs. in million)

	Note No.	Nine month ended December 31, 2023 (Unaudited)	Nine month ended December 31, 2022 (Unaudited)
Income			
Other income	13	11,589.71	3,177.76
Total Income		**11,589.71**	**3,177.76**
Expenses			
Finance costs	14	1,108.60	-
Investment Manager Fees		122.60	42.39
Trustee fees		0.12	-
Valuation Fees		2.73	-
Other expenses	15	1,706.35	402.47
TOTAL EXPENSES		2,940.40	**444.86**
Profit / (Loss) before tax		**8,649.31**	**2,732.90**
Tax expenses		-	-
Profit / (Loss) after tax (A)		**8,649.31**	**2,732.90**
Other comprehensive income / (loss) for the year (net of tax)			
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)		**-**	**-**
Other comprehensive income/(loss) for the year (net of tax) (B)		-	-
Total comprehensive income for the year, net of tax : (A+B)		**8,649.31**	**2,732.90**
Earnings per unit (Face value of Rs. 100 each)	**16**		
Basic		**9.07**	**3.11**
Diluted		**9.07**	**3.11**

The summary of selected explanatory notes forms an integral part of the Unaudited Condensed Interim Standalone Financial Statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : March 08, 2024

Place: Mumbai
Date : March 08, 2024

IRB Infrastructure Trust

Unaudited Condensed Interim Standalone Statement of Cash Flow for the period from April 01, 2023 to December 31, 2023

(Rs. in million)

Particulars	For period ended December 31, 2023 (Unaudited)	For period ended December 31, 2022 (Unaudited)
Cash flow from operating activities		
Profit / (Loss) before tax	8,649.31	2,732.90
Adjustments to reconcile profit before tax to net cash flows:		
Finance costs	1,108.60	-
Fair value gain on investments	(60.88)	(0.17)
Profit on sale of investments	(15.66)	(0.31)
Fair value loss on measurement of other payable	1,676.37	-
Interest income on		
- Fixed deposits	(50.93)	-
- Others	(11,462.24)	(3,177.28)
Operating profit/(loss) before working capital changes	**(155.41)**	**(444.85)**
Movement in working capital:		
Increase/(decrease) in trade payables	20.46	(8.18)
Increase/(decrease) in other financial liabilities	35.42	393.32
Increase/(decrease) in other current liabilities	(2.28)	5.53
(Increase)/decrease in Other current assets	4.19	-
(Increase)/decrease in loans	(0.01)	(1,389.24)
(Increase)/decrease in Other Financial assets	(33.46)	(1,760.00)
Cash generated from/(used in) operations	**(131.09)**	**(3,203.42)**
Direct taxes paid (net of refunds)	(0.80)	-
Net cash flows from/(used in) operating activities (A)	**(131.89)**	**(3,203.42)**
Cash flows from investing activities		
Investment in subsidiaries	(7,155.00)	(1,212.00)
Investment in sub debt of subsidiaries	(25,915.31)	(2,282.64)
Repayment of sub debt from subsidiaries	4,511.07	-
Loan given to subsidiaries Long term	(48,907.48)	(36.70)
Loan repayment from subsidiaries Short term	816.74	-
Loan given to subsidiaries short term	(941.23)	-
Proceeds from sale/ (purchase) of current investments (net)	(5,640.70)	(89.64)
Investments in Bank deposits (having maturity of more than three months)	(2,532.30)	-
Interest received on fixed deposit	23.01	-
Interest received from related parties	2,282.20	3,177.28
Net cash flows from/(used in) investing activities (B)	**(83,459.01)**	**(443.70)**
Cash flow from financing activities		
Proceeds from issuance of unit capital	28,619.50	2,425.00
Return of unit capital	(1,103.43)	-
Proceeds from long term borrowings	63,677.20	-
Repayment of long term borrowings	(400.36)	-
Transaction cost on long term borrowings	(708.60)	-
Proceeds / Repayment of curent borrowings	-	1,264.98
Loan received from Sponsor	400.00	-
Loan repayment to Sponsor	(5,272.91)	-
Unit Issue Expenses	(51.82)	(15.33)
Interest Distribution	(449.55)	-
Finance Cost paid	(1,097.14)	-
Net cash flows from/(used in) financing activities (C)	**83,612.89**	**3,674.65**
Net increase/(decrease) in cash and cash equivalents (A+B+C)	**21.99**	**27.52**
Cash and cash equivalents at the beginning of the period	6.56	0.25
Cash and cash equivalents at the end of the period (refer 5.2)	**28.55**	**27.77**
Components of cash and cash equivalents		
Balances with banks		
- On Current Account	28.55	27.77
Total Cash and cash equivalents (refer note 5.2)	**28.55**	**27.77**

IRB Infrastructure Trust

Unaudited Condensed Interim Standalone Statement of Cash Flow for the period from April 01, 2023 to December 31, 2023

Debt reconciliation statement in accordance with Ind AS 7		
Particulars	**For period ended December 31, 2023 (Unaudited)**	**For period ended December 31, 2022 (Unaudited)**
Opening balances as at beginning of the period		
Long term borrowings	-	-
Short term borrowings	4,872.91	3,607.93
Movements		
Long term borrowings	63,276.84	-
Short term borrowings	4,872.91	(1,264.98)
Closing balances as at end of the period		
Long term borrowings	63,276.84	-
Short term borrowings	-	4,872.91

The summary of selected explanatory notes forms an integral part of the Unaudited Condensed Interim Standalone Financial Statements.

Notes:

1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. The Unaudited Condensed Interim Standalone Cash Flow Statement has been prepared under Indirect Method as per Ind AS 7 “Statement of Cash Flows” .
4. The Borrowings reflected in above Debt Reconciliation Statement are gross of Unamortised Transaction Cost.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

Place: Mumbai
Date : March 08, 2024

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place : Mumbai
Date : March 08, 2024

IRB Infrastructure Trust

Unaudited Condensed Interim Standalone Statement of changes in Unitholders Equity for the period April 1, 2023 to December 31, 2023

(Rs. in million)

	As at December 31, 2023 (Unaudited)	As at March 31, 2023 (Audited)
I. Unit Capital		
a. Issued, subscribed and fully paid up Unit Capital		
Unit Capital of Rs 100 each issued, subscribed and fully paid up		
At the beginning of the year	87,929.33	85,504.33
Issued during the period / year	28,619.50	2,425.00
Less: Capital reduction during the period / year	(1,103.43)	-
At the end of the period / year	**1,15,445.40**	**87,929.33**

II. Reconciliation of the number of units outstanding and the amount of unit capital:

	As at December 31, 2023(Unaudited)		As at March 31, 2023(Audited)	
	No. of units	Amount in Million	No. of units	Amount in Million
At the beginning of the year	87,92,93,265	87,929.33	85,50,43,265	85,504.33
Issued during the period/year	14,24,00,000	28,619.50	2,42,50,000	2,425.00
Less : Capital Reduction during the period/year	-	(1,103.43)	-	-
At the end of the period/year	**1,02,16,93,265**	**1,15,445.40**	**87,92,93,265**	**87,929.33**

Other Equity

(Rs. in million)

	As at December 31, 2023 (Unaudited)	As at March 31, 2023 (Audited)
Retained earnings		
At the beginning of the year	9,526.42	5,992.74
Profit / (Loss) for the period / year	8,649.31	3,549.01
Unit issue expenses	(51.82)	(15.33)
Interest Distribution	(449.55)	
At the end of the period / year	**17,674.36**	**9,526.42**

The summary of selected explanatory notes forms an integral part of the Unaudited Condensed Interim Standalone Financial Statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894
Place: Mumbai
Date : March 08, 2024

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place : Mumbai
Date : March 08, 2024

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Unaudited Condensed Interim Standalone Statement of Net Asset at Fair Value

	As at December 31, 2023 (Unaudited)		As at March 31, 2023 (Audited)	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	2,33,294.49	3,25,178.34	1,38,193.71	1,87,704.45
B. Liabilities (at book value)	1,00,174.73	62,684.91	40,737.96	4,959.93
C. Net Assets (A-B)	1,33,119.76	2,62,493.43	97,455.75	1,82,744.52
D. Number of units (in millions)	1,021.69	1021.69	879.29	879.29
E. NAV (C/D) (Amount in Rs.)	**130.29**	**256.92**	**110.83**	**207.83**

B. Unaudited Condensed Interim Standalone Statement of total returns at Fair Value

Particulars	**As at December 31, 2023 (Unaudited)**	**As at March 31, 2023 (Audited)**
Total Comprehensive Income (As per the Statement of Profit and Loss)	8,649.31	3,549.01
Add/(less): Other Changes in Fair Value	1,29,373.67	85,288.77
Comprehensive Income	**1,38,022.99**	**88,837.78**

Notes :

Fair value of assets as at December 31, 2023 and March 31, 2023 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

Place: Mumbai
Date : March 08, 2024

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
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DIN : 00183554

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SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : March 08, 2024

1. Trust Information and Nature of Operations

IRB Infrastructure Trust (the "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under Indian Trust Act, 1882 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Trust is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registration certificate from SEBI having registration number IN/InviT/19-20/0012.

The Trust has been formed to invest in infrastructure assets primarily being in the road sector in India. The Trust's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Trust's portfolio comprises of thirteen road projects as listed below:-

The Trust had acquired the projects at Sr no 1 to 9 from the Sponsor which are road infrastructure projects developed on DBFOT basis. The SPV from Sr. no 10 has been added to portfolio from the respective dates as stated below:

Sr. No.	Project SPV Name
1	AE Tollway Limited (AETL)
2	CG Tollway Limited (CGTL)
3	IRB Hapur Moradabad Tollway Limited (IRBHMTL)
4	IRB Westcoast Tollway Limited (IRBWTL)
5	Kishangarh Gulabpura Tollway Limited (KGTL)
6	Kaithal Tollway Limited (KTL)
7	Solapur Yedeshi Tollway Limited (SYTL)
8	Udaipur Tollway Limited (UTL)
9	Yedeshi Aurangabad Tollway Limited (YATL)
10	Palsit Dankuni Tollway Private Limited(PDTPL) (w.e.f. 02.04.2022)
11	IRB Golconda Expressway Private Limited (IGEPL) (w.e.f.11.08.2023)
12	IRB Lalitpur Tollway Private Limited (ILTPL) (w.e.f.10.11.2023)
13	Samakhiyali Tollway Limited (STL) (w.e.f. 28.12.2023)

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.

The Trust has been listed on NSE w.e.f. 03.04.2023

2. **Basis of preparation**

The Unaudited Condensed Interim Standalone Financial Statements which comprises Condensed Interim Standalone Balance Sheet as on December 31, 2023, Unaudited Condensed Interim Standalone Statement of Profit and Loss, including other comprehensive income, Unaudited Condensed Interim Standalone Statement of Net Asset at Fair Value, Unaudited Condensed Interim Standalone Statement of total returns at Fair Value, Unaudited Condensed Interim Standalone Cash Flow Statement and Unaudited Condensed Interim Standalone Statement of Changes in Unitholders Equity for the nine months period then ended and a summary of select explanatory notes (together hereinafter referred to as the “Unaudited Condensed Interim Standalone Financial Statements”). These unaudited condensed interim standalone financial statments for the period from April 01, 2023 to December 31, 2023 have been prepared solely for inclusion in the Letter of Offer ("LOF") in connection with the proposed right issue of units of the Trust.

The Unaudited Condensed Interim Standalone Financial Statements has been prepared in accordance with the requirements of SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended from time to time read with the Paragraph 3.23 of Chapter 3 of the SEBI Circular No. SEBI/HO/DDHS-PoD-2/P/CIR/2023/115 dated July 06, 2023 (“SEBI Circular”), together known as ("lnvlT Regulations"); recognition and measurement principles laid down in Indian Accounting Standard 34, Interim Financial Reporting (Ind AS 34) prescribed under rule 2(1)(a) of Companies (Indian Accounting Standards) Rules 2015, as amended and other recognised accounting principles generally accepted in India, to the extent not inconsistent with the InvIT Regulations, (refer note 8 below on presentation of "Unit Capital" as "Equity" instead of compound instruments under Ind AS 32 - Financial Instuments : Presentation)

These Unaudited Condensed Interim Standalone Financial Statements for the period from April 01, 2023 to December 31, 2023 have been prepared solely for inclusion in the Letter of Offer in connection with the proposed right issue of units of the Trust, and should not be relied upon for any other purpose.

These Unaudited Condensed Interim Standalone Financial Statements are not the statutory accounts for the purpose of any statutory compliances or for regulatory requirements in any jurisdiction. The Condensed Standalone Financial Statements of the Trust for the period from April 01, 2023 to December 31, 2023 were approved by the Board of Directors of the Investment Manager and authorised for inclusion in the Letter of Offer of the Trust on March 08, 2024.

The Unaudited Condensed Interim Standalone Financial Statements do not include all the information and disclosures required in the Annual Financial Statements, and should be read in conjunction with the Trust’s annual Standalone Financial Statements as at March 31, 2023.

3. Standard issued but not yet effective

Ministry of Corporate affairs ("MCA") notifies new standard or amendment to the existing standards. There is no such notification which would have been applicable from January 01, 2024.

(Rs. in million)

	As at December 31, 2023 (Unaudited)	As at March 31, 2023 (Audited)
Note 4 : Financial assets (Non-current)		
4.1 Investments		
Investments at cost		
A. Investments in equity instruments of subsidiaries (unquoted)		
436,500,000 equity shares of AE Tollway Limited	4,365.00	4,365.00
203,500,000 equity shares of CG Tollway Limited	2,035.00	2,035.00
371,500,000 equity shares of IRB Hapur Moradabad Tollway Limited	3,715.00	3,715.00
174,194,303 equity shares of IRB Westcoast Tollway Limited	1,741.94	1,741.94
155,500,000 equity shares of Kishangarh Gulabpura Tollway Limited	1,555.00	1,555.00
328,000,000 equity shares of Kaithal Tollway Limited	3,280.00	3,280.00
98,250,000 equity shares of Solapur Yedeshi Tollway Limited	982.50	982.50
116,800,000 equity shares of Udaipur Tollway Limited	1,168.00	1,168.00
215,757,001 equity shares of Yedeshi Aurangabad Tollway Limited	2,157.57	2,157.57
121,200,000 equity shares of Palshit Dankuni Tollway Private Limited	1,212.00	1,212.00
715,450,000 equity shares of IRB Golconda Expressway Private Limited	7,154.50	-
50,000 equity shares of IRB Lalitpur Tollway Private Limited	0.50	-
Investments in Equity Instuments of subsidiaries (unquoted) (A)	**29,367.01**	**22,212.01**
B. Investments in sub debt of subsidiaries (Quoted) (Interest free)		
AE Tollway Limited	-	10,265.88
CG Tollway Limited	2,896.26	2,727.80
IRB Hapur Moradabad Tollway Limited	-	9,798.52
IRB Westcoast Tollway Limited	-	12,203.92
Kishangarh Gulabpura Tollway Limited	-	2,495.38
Kaithal Tollway Private Limited	-	4,426.04
Solapur Yedeshi Tollway Limited	-	4,423.70
Udaipur Tollway Limited	8,893.41	8,338.40
Yedeshi Aurangabad Tollway Limited	-	16,319.79
Palshit Dankuni Tollway Private Limited	3,637.50	1,213.00
Investments in sub debt of subsidiaries (Quoted) (Interest free) (B)	**15,427.17**	**72,212.43**
Total non-current investments (A + B)	**44,794.18**	**94,424.44**
Aggregate amount of unquoted investments	**44,794.18**	**94,424.44**

4.2 Loans		
Secured, considered good, unless otherwise stated		
Loans to Related Parties (interest bearing) (refer note 21)	45,997.16	-
Less: Current maturities of loan to related parties	(1,417.50)	-
Subordinate debt (interest bearing)	78,189.50	-
Total (A)	**1,22,769.16**	**-**

(Rs. in million)

	As at December 31, 2023 (Unaudited)	As at March 31, 2023 (Audited)
4.2 Loans (continued)		
Unsecured, considered good, unless otherwise stated		
Loans to Related Parties (interest bearing) (refer note 21)	32,873.62	30,000.00
Less: Current maturities of loan to related parties	(364.32)	-
Loans to Related Parties (interest free) (refer note 21)	388.39	351.69
Total (B)	**32,897.69**	**30,351.69**
Total (A+B)	**1,55,666.85**	**30,351.69**
4.3 Other Financial Assets		
Unsecured, considered good, unless otherwise stated		
Receivable from Related Parties (BG Margin receivable) (refer note 21)	30.95	-
	30.95	**-**
Note 5 : Financial assets (current)		
5.1 Investments		
Investments in mutual fund (quoted)		
Investments in Mutual Funds (quoted) (Fair Value through Profit & Loss)	5,737.32	20.08
	5,737.32	**20.08**
5.2 Cash and cash equivalent		
Balances with banks:		
- In current accounts	28.55	6.56
	28.55	**6.56**
5.3 Other bank balances		
Debt service reserve account with banks /earmarked balance		
- Maturity more than 12 months	582.20	-
- Maturity more than 3 but less than 12 months	950.10	-
Cash Reserve		
- Original maturity more than 3 but less than 12 months	1,000.00	-
	2,532.30	**-**
5.4 Loans		
Secured, considered good, unless otherwise stated		
Current maturities of long term loans (interest bearing)	1,417.50	-
Total (A)	**1,417.50**	**-**
Unsecured, considered good, unless otherwise stated		
Loans to Related Parties (interest bearing) (refer note 21)	2,770.74	-
Loans to Related Parties (interest free) (refer note 21)	2,775.04	5,421.29
Current maturities of loan to related parties	364.33	-
Total (B)	**5,910.11**	**5,421.29**
Total (A+B)	**7,327.61**	**5,421.29**

(Rs. in million)

	As at December 31, 2023 (Unaudited)	As at March 31, 2023 (Audited)
5.5 Other financial assets		
Unsecured, considered good, unless otherwise stated		
Interest accrued on fixed deposits	27.92	-
Interest receivable from related parties (Refer note 21)	16,861.08	7,681.04
Other receivables		
- related parties (Refer note 21)	286.64	284.13
	17,175.64	**7,965.17**

Note 6 : Current tax assets (net)		
Advance income tax	0.80	-
	0.80	**-**

Note 7 : Other current assets		
Duties and taxes receivable	-	3.30
Prepaid expenses	0.29	1.18
Total	**0.29**	**4.48**

Note 8 : Unit Capital

(Rs. in million)

	As at December 31, 2023 (Unaudited)	As at March 31, 2023 (Audited)
I. Unit capital*		
a. Issued, subscribed and fully paid up Unit Capital		
Unit capital of Rs. 100 each issued, subscribed and fully paid up		
At the beginning the year	87,929.33	85,504.33
Issued during the period/year	28,619.50	2,425.00
Less : Capital Reduction during the period/year (refer note 27)	(1,103.43)	-
At the end of the period/year	**1,15,445.40**	**87,929.33**

* Under the provisions of the InvIT Regulations, Trust is required to distribute to Unitholders not less than 90% of the net distributable cash flows of the Trust for each financial year. Accordingly, a portion of the Unit Capital contains a contractual obligation of the Trust to pay to its Unitholders cash distributions. Hence, the Unit Capital is a compound financial instrument which contains equity and liability components in accordance with Ind AS 32 - Financial Instruments. However, in accordance with Chapter 3 and Chapter 4 of the SEBI circular, the Unit capital have been presented as "Equity" in order to comply with the requirements of Section H of Chapter 3 to the SEBI circular, dealing with the minimum presentation and disclosure requirements for key financial statements. Consistent with Unit Capital being classified as equity, the distributions to Unitholders is also presented in Statement of Changes in Unitholders' Equity when the distributions are approved by the Board of Directors of Investment Manager.

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax

II. Reconciliation of the number of units outstanding and the amount of unit capital:

	As at December 31, 2023 (Unaudited)		As at March 31, 2023 (Audited)	
	No. of units	Amount in Million	No. of units	Amount in Million
At the beginning of the year	87,92,93,265	87,929.33	85,50,43,265	85,504.33
Issued during the period/year	14,24,00,000	28,619.50	2,42,50,000	2,425.00
Less : Capital Reduction during the period/year	-	(1,103.43)	-	-
At the end of the period/year	**1,02,16,93,265**	**1,15,445.40**	**87,92,93,265**	**87,929.33**

III. Details of Promoter

	As at December 31, 2023 (Unaudited)		As at March 31, 2023 (Audited)	
	No. of units	%	No. of units	%
IRB Infrastructure Developers Limited	52,12,39,840	51%	44,84,39,840	51%
Anahera Investments Pte Ltd	25,56,23,181	25%	21,98,23,181	25%
Bricklayers Investments Pte Ltd	6,11,57,561	6%	5,27,57,561	6%
Chiswick Investments Pte Ltd	6,11,57,561	6%	5,27,57,561	6%
Stretford End Investments Pte Ltd	6,11,57,561	6%	5,27,57,561	6%
Dangenham Investments Pte Ltd	6,13,57,561	6%	5,27,57,561	6%
Total	**1,02,16,93,265**	100%	**87,92,93,265**	100%

Note 9 Other Equity

(Rs. in million)

	As at December 31, 2023 (Unaudited)	As at March 31, 2023 (Audited)
Retained earnings		
At the beginning of the year	9,526.42	5,992.74
Profit/(loss) for the period/year	8,649.31	3,549.01
Unit issue expenses	(51.82)	(15.33)
Interest Distribution (refer note 27)	(449.55)	-
Total Other Equity	**17,674.36**	**9,526.42**

(Rs. in million)

	As at December 31, 2023 (Unaudited)	As at March 31, 2023 (Audited)
Note 10 : Non-current financial liabilities		
Note 10.1 : Borrowings		
Non Current Borrowing		
Term loans		
Indian rupee loan from banks (Secured)	34,522.70	-
Less: Current maturities	(436.25)	-
Total (a)	**34,086.45**	**-**
Indian rupee loan from financial institutions (Secured)	28,754.14	-
Less: Current maturities	(362.50)	-
Total (b)	**28,391.64**	**-**
Unsecured		
Less : Unamortised transaction cost (c)	(700.39)	-
Total Non Current Borrowing (d=a+b+c)	**61,777.70**	**-**
10.2 Other financial liabilities		
Other Payable		
- related party(Refer note 21)	37,489.82	35,778.03
	37,489.82	**35,778.03**
Note 11 : Current financial liabilities		
Note 11.1 : Current Borrowing		
Current maturities of long-term borrowings		
- Indian rupee loan from banks	436.25	-
- Indian rupee loan from financial institutions	362.50	-
Loan from related parties		
- Interest free (Refer note 21)	-	4,872.91
Interest accrued but not due on borrowings	3.25	-
Total Current Borrowings (e)	**802.00**	**4,872.91**
Total Borrowing (d+e)	**62,579.70**	**4,872.91**

The unsecured loan taken from fellow subsidiary is repayable on demand

Rate of Interest

Rate of interest on the Indian Rupee loan from banks and financial institutions varies from 8.60% to 8.70% p.a. (March 31, 2023: Nil)

Nature of security

i) Secured by first charge on the movable/immovable asset by way of mortgage/hypothecation; first charge on all intangible assets, assignment of all receivables; book debts, loans and advanves extended by the Borrower to SPVs and all rights and interest in project, both present and future, excluding the Project Assets of respective companies;

ii) Secured by first charge over all the equity shares, Preference shares, Debentures representing 100% of such securities.

iii) Secured by first charge on the Escrow Account, Debt Service Reserve Account and any other reserves and other bank accounts of the respective Companies.

iv) Unconditional and irrevocable corporate guarantee by each of the RG SPVs , in a form and manner satisfactory to the Finance Parties (the " Corporate Guarantee")

v) Pledged of Securities of obligators created pursuant to the terms of loan Agreement held as common security for the benefit of Rupee Lenders

Repayment terms

The Indian rupee loans from Banks and Financial Institutions are repayable in structured monthly installments such that the total tenor does not exceed 16 years and repayable as per the repayment schedule specified in common loan agreement with the Lenders.

(Rs. in million)

	As at December 31, 2023 (Unaudited)	As at March 31, 2023 (Audited)
11.2 Trade Payables		
a) total outstanding dues of micro enterprises and small enterprises	-	0.01
b) Total outstanding dues of creditors other than micro and small enterprises		
- related parties (Refer note 21)	101.45	78.54
- others	0.36	2.80
Total	**101.81**	**81.35**
Note 12 : Other current liabilities		
Statutory dues payable (including PF, TDS, GST & others)	3.40	5.67
Total	**3.40**	**5.67**

(Rs. in million)

	Nine month ended December 31, 2023 (Unaudited)	Nine month ended December 31, 2022 (Unaudited)
Note 13 : Other income		
Interest income on		
- Bank deposits	50.93	-
- Interest income from Related parties	11,462.24	3,177.28
Profit on sale of investment	15.66	0.31
Fair value gain on Mutual Fund	60.88	0.17
	11,589.71	**3,177.76**
Note 14 : Finance costs		
Interest expense		
- Term loan from bank / financial institutions	1,099.80	-
Other borrowing costs		
- Amorisation of transaction cost	8.21	-
- Other finance costs	0.59	-
	1,108.60	**-**
Note 15 : Other expenses		
Rates and taxes	1.32	0.11
Legal and professional fees	23.23	44.54
Payment to auditor (refer note below)	0.69	0.82
Bank charges	4.13	0.03
Miscellaneous expenses	0.61	0.34
Fair value loss on measurement of other payable	1,676.37	356.63
	1,706.35	**402.47**
Payment to auditor		
- Statutory audit fees	0.24	0.22
- Limited review fees	0.42	0.43
- Other services (certification fees)	-	0.10
Reimbursement of expenses	0.03	0.07
	0.69	**0.82**

IRB Infrastructure Trust

Notes to Unaudited Condensed Interim Standalone Financial Statements as at December 31, 2023

Note 16 : Earnings per unit (EPU)

The following reflects the income and unit data used in the basic and diluted EPU computations:

(Rs. in million)

	Nine month ended December 31, 2023 (Unaudited)	Nine month ended December 31, 2022 (Unaudited)
Profit attributable to unit holders of the Trust for basic & diluted earnings	8,649.31	2,732.90
Weighted average number of unit for basic & diluted EPU*	**95,38,59,083**	**87,75,29,629**
Face Value per unit (Amount in Rs.)	100.00	100.00
Earnings per unit (in Rs.)*		
Basic earning per unit (Amount in Rs.)	9.07	3.11
Diluted earning per unit (Amount in Rs.)	9.07	3.11

* Not annualised

Note 17 : Capital and other commitments

There are no capital and other commitments as at December 31, 2023. (As at March 31, 2023. Nil)

Note 18 :Contingent liabilities

The Trust has provided Corporate guarantee for the subsidiary companies i.e. SYTL and YATL in respect of the NCDs issued during the FY 2022-23.

Note 19 : Operating segment

The Trust is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Trust's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

Note 20: Capitalisation Statement

(Rs. in million)

Particulars	As at December 31, 2023 (Unaudited)
Unitholder's Funds:	
Unit Capital	1,15,445.40
Other Equity	17,674.36
Total Unitholder's Funds	**1,33,119.76**
Borrowings	
Long term borrowings	61,777.70
Current maturities of long term borrowings (including interest accrued but not due)	802.00
Total Debt	**62,579.70**
Total Capitalisation	**1,95,699.46**

Note 21 : Related party disclosures

List of Related parties of the Trust

1	Parties to the InvIT	IRB Infrastructure Developers Limited (Sponsor Group and Project Manager)
		MMK Toll Road Private Limited (Investment Manager)
		IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
2	Associates, Promoters, Directors and Partners of the persons mentioned in clause 1	As per table below #

 # List of Associates, Promoters, Directors and Partners of the persons mentioned in clause 1

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manager)**	**MMK Toll Road Private Limited (Investment Manager)**	**IDBI Trusteeship Services Limited (Trustee of IRB Infrastructure Trust)**
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Virendra D. Mhaiskar (HUF)	IRB Infrastructure Developers Limited (IRBIDL)	IDBI Bank Limited LIC Corporation Limited General Insurace Corporation
Directors	Mr. Virendra D. Mhaiskar, Chairman and Managing Director Mrs. Deepali V. Mhaiskar, Whole Time Director Mr. Jose Tamariz Martel Goncer Mr. Ravindra Dhariwal	Mr. Virendra D Mhaiskar Mr. Kunnasagaran Chinniah Mr. Boon Chin Hau (w.e.f . 31.05.2023) Mr. Aryan Mhaiskar (w.e.f.31.05.2023)	Mr. Jayakumar Subramonia Pillai Mr. Pradeep Kumar Jain Mrs. Jayashree Vijay Ranade Mr. Pradeep Kumar Malhotra Ms. Baljinder Kaur Mandal
	Independent directors	**Independent directors**	
	Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Ms. Priti Savla, Independent Director	Mr. K G Krishnamurthy Mrs.Ranjana Paranjape Mr. Nagendraa Parakh (w.e.f. 31.05.2023) Mr. Amyn Jassani (w.e.f. 31.05.2023)	

Associates	**A) Holding Company of Sponsor / Project Manager** IRB Holding Private Limited (Formerly Mhaiskar Ventures Private Limited) **B) Project SPV's of Trust** 1. IRB Westcoast Tollway Limited (IRBWTL) 2. Solapur Yedeshi Tollway Limited (SYTL) 3. Yedeshi Aurangabad Tollway Limited (YATL) 4. Kaithal Tollway Limited (KTL) 5. AE Tollway Limited (AETL) 6. Udaipur Tollway Limited (UTL) 7. CG Tollway Limited (CGTL) 8. Kishangarh Gulabpura Tollway Limited (KGTL) 9. IRB Hapur Muradabad Tollway Limited (IRBHMTL) 10. Palsit Dankuni Tollway Private Limited (PDTPL) 11. IRB Golconda Expressway Private Limited w.e.f. 11.08.2023 12. IRB Lalitpur Tollway Private Limited w.e.f 10.11.2023 13. Samakhiyali Tollway Private Limited w.e.f. 28.12.2023 **C) Subsidiaries/JV's of Sponsor / Project Manager** 1. Ideal Road Builders Private Limited (IRBPL) 2. Mhaiskar Infrastructure Private Limited (MIPL) 3. Modern Road Makers Private Limited (MRMPL) 4. Aryan Toll Road Private Limited (ATRPL) 5. ATR Infrastructure Private Limited (ATRFL) 6. IRB Infrastructure Private Limited (IRBFL) 7. Thane Ghodbunder Toll Road Private Limited (TGTRPL) 8. Aryan Infrastructure Investments Private Limited (AIIPL) 9. IRB MP Expressway Private Limited (formerly known as NKT Road and Toll Private Limited) 10. MMK Toll Road Private Limited (MMK) (Entity with Joint Control) 11. IRB Kolhapur Integrated Road Development Company Private Limited (IRBK) 12. Aryan Hospitality Private Limited (AHPL) 13. IRB Sindhudurg Airport Private Limited (IRBSA) 14. IRB Goa Tollway Private Limited (IRB Goa) 15. IRB PS Highway Private Limited (formerly known as MRM Highways Private Limited) (IRBPS) 16. IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV) 17. MRM Mining Private Limited (Formerly "J J Patel Infrastructural and Engineering Private Limited") (Subsidiary of MRMPL) 18. GE1 Expressway Private Limited (formerly known as IRB PP Project Private Limited) 19. VK1 Expressway Limited (VK1) (formerly known as VK1 Expressway Private Limited) (upto October 12, 2022) 20. Pathankot Mandi Highway Private Limited 21. Chittoor Thachur Highway Private Limited 22. Meerut Budaun Expressway Limited - Subsidiary upto October 14, 2022 and Entity with Joint Control w.e.f. October 15,2022 23. VM7 Expressway Private Limmited
	D) Other Associate Companies of Sponsor / Project Manager 1. Virendra D. Mhaiskar (HUF) 2. VCR Toll Services Private Limited 3. VDM Ventures Private Limited 4. DEUX Farming Films Private Limited 5. IRB Charitable Foundation **Key Managerial personnel (Only with whom Trust had transactions during the period/ there was balance outstanding at the year end)** 1. Ms. Shilpa Todankar 2. Mr. Abhay Phatak 3. Mr. Darshan Sangurdekar 4. Mr. Omprakash Singh 5. Mr. Chandrashekhar Kaptan 6. Mrs. Ranjana Paranjape 7. Mrs. Arati Taskar 8. Mr. Sudhir Rao Hoshing 9. Mr. Rajpaul Sharma 10. Mr. Amitabh Murarka 11. Devendra Ranka (Appointed as CFO) 12. Jaypraksah Nandi (Appointed as CEO) 13. Mr. Tushar Kawedia 14. Swati Chandekar (Appointed as CS of Yedeshi Aurangabad Tollway Limited)

IRB Infrastructure Trust
Notes to Unaudited Condensed Interim Standalone Financial Statements as at December 31, 2023

II) Related party transaction during the peiod

(Rs. in million)

Sr. No.	Particulars	Relation	Period ended December 31, 2023	Period ended December 31, 2022
1	**Equity Investment**		**7,155.00**	**1,212.00**
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	-
	IRB Golconda Expressway Private Limted	Subsidiary	7,154.50	-
	IRB Lalitpur Tollway Private Limited	Subsidiary	0.50	-
	Palshit Dankuni Tollway Private Limited	Subsidiary	-	1,212.00
2	**Subordinated Debt**		**25,915.31**	**2,282.64**
	AE Tollway Limited	Subsidiary	159.52	-
	CG Tollway Limited	Subsidiary	168.46	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	64.18	383.76
	Kaithal Tollway Limited	Subsidiary	46.82	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	685.88
	Udaipur Tollway Limited	Subsidiary	555.01	-
	Solapur Yedeshi Tollway Limited	Subsidiary	203.47	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	828.35	-
	IRB Golconda Expressway Private Limted	Subsidiary	21,465.00	-
	Palshit Dankuni Tollway Private Limited	Subsidiary	2,424.50	1,213.00
3	**Subordinated Debt- repaid**		**4,511.07**	-
	IRB Westcoast Tollway Limited	Subsidiary	4,415.12	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	95.95	-
4	**Long term loan**		**1,615.96**	**36.70**
	AE Tollway Limited	Subsidiary	414.30	-
	IRB Westcoast Tollway Limited	Subsidiary	464.05	-
	Kaithal Tollway Limited	Subsidiary	507.97	36.70
	Kishangarh Gulabpura Tollway Limited	Subsidiary	197.85	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	31.80	-
5	**Short Term Loan given**		**941.23**	**2,057.60**
	AE Tollway Limited	Subsidiary	-	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	-
	IRB Westcoast Tollway Limited	Subsidiary	-	1,088.60
	Kaithal Tollway Limited	Subsidiary	-	-
	Solapur Yedeshi Tollway Limited	Subsidiary	-	-
	Udaipur Tollway Limited	Subsidiary	560.04	886.50
	CG Tollway Limited	Subsidiary	320.59	80.00
	Kishangarh Gulabpura Tollway Limited	Subsidiary	60.00	-
	IRB Lalitpur Tollway Private Limited	Subsidiary	0.60	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	2.50
6	**Short Term Loan repaid**		**816.74**	**668.36**
	IRB Hapur Muradabad Tollway Limited		-	37.26
	AE Tollway Limited	Subsidiary	409.30	-
	IRB Westcoast Tollway Limited	Subsidiary	136.28	-
	Kaithal Tollway Limited	Subsidiary	82.16	525.10
	Solapur Yedeshi Tollway Limited	Subsidiary	24.00	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	165.00	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	106.00
7	**Unit Capital Issued**		**14,631.32**	**1,236.75**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	14,631.32	1,236.75
8	**Interest income**		**11,462.24**	**3,177.28**
	Solapur Yedeshi Tollway Limited	Subsidiary	894.35	421.92
	Yedeshi Aurangabad Tollway Limited	Subsidiary	1,339.03	434.81
	Kaithal Tollway Limited	Subsidiary	1,572.67	893.58
	IRB Westcoast Tollway Limited	Subsidiary	2,320.72	421.92
	AE Tollway Limited	Subsidiary	2,301.54	1,005.05
	Kishangarh Gulabpura Tollway Limited	Subsidiary	503.39	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	1,394.85	-
	IRB Golconda Expressway Private Limited	Subsidiary	1,135.69	-

IRB Infrastructure Trust
Notes to Unaudited Condensed Interim Standalone Financial Statements as at December 31, 2023

II) Related party transaction during the peiod

(Rs. in million)

Sr. No.	Particulars	Relation	Period ended December 31, 2023	Period ended December 31, 2022
9	**Investment Manager Fees**		**122.60**	**38.80**
	MMK Toll Road Pvt Limited	Investment Manager	122.60	38.80
10	**Expenses incurred on behalf of others**		**57.43**	**224.66**
	AE Tollway Limited	Subsidiary	3.69	0.01
	CG Tollway Limited	Subsidiary	-	44.53
	Kishangarh Gulabpura Tollway Limited	Subsidiary	11.37	158.35
	IRB Hapur Muradabad Tollway Limited	Subsidiary	4.25	21.43
	IRB Westcoast Tollway Limited	Subsidiary	7.07	0.34
	Udaipur Tollway Limited	Subsidiary	0.00	-
	Solapur Yedeshi Tollway Limited	Subsidiary	0.00	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	0.00	-
	Kaithal Tollway Limited	Subsidiary	5.12	-
	Palsit Dankuni Tollway Private Limited	Subsidiary	25.47	-
	MMK Toll Road Pvt Limited	Investment Manager	0.45	-
	IRB Golconda Expressway Private Limited	Subsidiary	0.39	-
	IRB Lalitpur Tollway Private Limited	Subsidiary	0.01	-
11	**Reimbursement received on expenses incurred on behalf of others**		**55.29**	**27.43**
	AE Tollway Limited	Subsidiary	3.55	-
	CG Tollway Limited	Subsidiary	-	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	0.00	-
	IRB Westcoast Tollway Limited	Subsidiary	20.84	-
	Udaipur Tollway Limited	Subsidiary	-	0.98
	Solapur Yedeshi Tollway Limited	Subsidiary	-	24.11
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	2.34
	Kaithal Tollway Limited	Subsidiary	4.52	-
	Palsit Dankuni Tollway Private Limited	Subsidiary	25.47	-
	MMK Toll Road Pvt Limited	Subsidiary	0.53	-
	IRB Golconda Expressway Private Limited	Subsidiary	0.39	-
12	**Unsecured Loan received**		**400.00**	**1,264.98**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	400.00	1,264.98
13	**Unsecured Loan paid**		**5,272.91**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	5,272.91	-
14	**Long Term loan received-MMR**		**1,294.36**	**-**
	IRB Westcoast Tollway Limited	Subsidiary	410.13	-
	Kaithal Tollway Limited	Subsidiary	449.90	-
	AE Tollway Limited	Subsidiary	390.81	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	43.52	-
15	**Secured Long Term Loan received**		**45,997.15**	**-**
	IRB Westcoast Tollway Limited	Subsidiary	9,538.54	-
	Kaithal Tollway Limited	Subsidiary	4,801.81	-
	AE Tollway Limited	Subsidiary	6,766.21	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	9,944.52	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	14,946.07	-

IRB Infrastructure Trust
Notes to Unaudited Condensed Interim Standalone Financial Statements as at December 31, 2023

II) Related party transaction during the peiod

(Rs. in million)

Sr. No.	Particulars	Relation	Period ended December 31, 2023	Period ended December 31, 2022
16	**Other Payable**		**1,713.07**	**393.32**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1,676.37	356.62
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project Manager	36.70	36.70
17	**Interest Distribution**		**229.35**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	229.35	-
18	**Capital Reduction**		**562.94**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	562.94	-
19	**Expenses incurred on our behalf**		**4.10**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	4.10	-
20	**BG Margin paid on behalf of others**		**30.95**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	30.95	-
21	**Reimbursement of expenses incurred on our behalf**		**1.28**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1.28	-
22	**Trustee Fees**		**0.12**	**-**
	IDBI Trusteeship Services Limited	Trustee	0.12	-

IRB Infrastructure Trust
Notes to Unaudited Condensed Interim Standalone Financial Statements as at December 31, 2023

III) Related party outstanding balances

(Rs. in million)

Sr. No.	Particulars	Relation	As on December 31,2023	As on March 31,2023
1	**Equity Investment**		**29,367.01**	**22,212.01**
	AE Tollway Limited	Subsidiary	4,365.00	4,365.00
	CG Tollway Limited	Subsidiary	2,035.00	2,035.00
	IRB Hapur Muradabad Tollway Limited	Subsidiary	3,715.00	3,715.00
	IRB Westcoast Tollway Limited	Subsidiary	1,741.94	1,741.94
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,555.00	1,555.00
	Kaithal Tollway Limited	Subsidiary	3,280.00	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	982.50	982.50
	Udaipur Tollway Limited	Subsidiary	1,168.00	1,168.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	2,157.57	2,157.57
	Palshit Dankuni Tollway Private Limited	Subsidiary	1,212.00	1,212.00
	IRB Golconda Expressway Private Limted	Subsidiary	7,154.50	-
	IRB Lalitpur Tollway Private Limted	Subsidiary	0.50	-
2	**Subordinated Debt**		**15,427.17**	**72,212.43**
	AE Tollway Limited	Subsidiary	-	10,265.88
	CG Tollway Limited	Subsidiary	2,896.26	2,727.80
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	9,798.52
	IRB Westcoast Tollway Limited	Subsidiary	-	12,203.92
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	2,495.38
	Kaithal Tollway Limited	Subsidiary	-	4,426.04
	Solapur Yedeshi Tollway Limited	Subsidiary	-	4,423.70
	Udaipur Tollway Limited	Subsidiary	8,893.41	8,338.40
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	16,319.79
	Palshit Dankuni Tollway Private Limited	Subsidiary	3,637.50	1,213.00
3	**Long term loan (Interest bearing)**		**31,579.27**	**30,000.00**
	AE Tollway Limited	Subsidiary	9,942.71	9,528.41
	IRB Westcoast Tollway Limited	Subsidiary	4,464.05	4,000.00
	Kaithal Tollway Limited	Subsidiary	8,942.85	8,471.59
	Solapur Yedeshi Tollway Limited	Subsidiary	4,000.00	4,000.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	4,000.00	4,000.00
	Kishangarh Gulabpura Tollway Limited	Subsidiary	197.85	
	IRB Hapur Moradabad Tollway Limited	Subsidiary	31.80	
4	**Subordinated debt - (Interest bearing)**		**78,189.50**	-
	AE Tollway Limited	Subsidiary	10,425.40	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	9,862.69	-
	IRB Westcoast Tollway Limited	Subsidiary	7,788.81	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	2,399.43	-
	Kaithal Tollway Private Limited	Subsidiary	4,472.86	-
	Solapur Yedeshi Tollway Limited	Subsidiary	4,627.17	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	17,148.14	-
	IRB Golconda Expressway Private Limted	Subsidiary	21,465.00	-
5	**Long term loan (Interest bearing) -MMR**		**1,294.36**	-
	IRB Westcoast Tollway Limited	Subsidiary	410.13	-
	Kaithal Tollway Limited	Subsidiary	449.90	-
	AE Tollway Limited	Subsidiary	390.81	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	43.52	-
6	**Long term loan (Interest free)**		**388.39**	**351.69**
	Kaithal Tollway Limited	Subsidiary	388.39	351.69
7	**Secured Long Term Loan (Interest bearing)**		**45,997.16**	-
	IRB Westcoast Tollway Limited	Subsidiary	9,538.54	-
	Kaithal Tollway Limited	Subsidiary	4,801.81	-
	AE Tollway Limited	Subsidiary	6,766.21	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	9,944.52	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	14,946.07	-

IRB Infrastructure Trust
Notes to Unaudited Condensed Interim Standalone Financial Statements as at December 31, 2023

III) Related party outstanding balances

(Rs. in million)

Sr. No.	Particulars	Relation	As on December 31,2023	As on March 31,2023
8	**Short Term Loan**		**5,545.78**	**5,421.29**
	AE Tollway Limited	Subsidiary	69.59	478.89
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	-
	IRB Westcoast Tollway Limited	Subsidiary	2,211.80	2,348.08
	Kaithal Tollway Limited	Subsidiary	74.55	156.71
	Solapur Yedeshi Tollway Limited	Subsidiary	-	24.00
	Udaipur Tollway Limited	Subsidiary	1,895.35	1,335.31
	Yedeshi Aurangabad Tollway Limited	Subsidiary	354.80	519.80
	IRB Lalitpur Tollway Private Limited	Subsidiary	0.60	-
	CG Tollway Limited	Subsidiary	879.09	558.50
	Kishangarh Gulabpura Tollway Limited	Subsidiary	60.00	-
9	**Other Payable**		**37,489.33**	**35,776.26**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	33,771.95	32,095.57
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project Manager	388.39	351.69
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project Manager	1,784.13	1,784.13
	IRB Goa Tollway private Limited	Subsidiaries Company of Sponsor and Project Manager	1,544.86	1,544.86
10	**Other payable (Reimbursement of Expenses incurred on our behalf)**		**0.49**	**1.77**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	0.49	1.77

IRB Infrastructure Trust
Notes to Unaudited Condensed Interim Standalone Financial Statements as at December 31, 2023

III) Related party outstanding balances

(Rs. in million)

Sr. No.	Particulars	Relation	As on December 31,2023	As on March 31,2023
11	**Other Receivable**		**286.64**	**284.13**
	Solapur Yedeshi Tollway Limited	Subsidiary	4.89	4.89
	Yedeshi Aurangabad Tollway Limited	Subsidiary	8.17	8.17
	IRB Westcoast Tollway Limited	Subsidiary	-	13.76
	Udaipur Tollway Limited	Subsidiary	14.12	14.11
	AE Tollway Limited	Subsidiary	0.14	0.01
	CG Tollway Limited	Subsidiary	47.34	47.35
	Kishangarh Gulabpura Tollway Limited	Subsidiary	182.68	171.32
	IRB Hapur Moradabad Tollway Limited	Subsidiary	27.15	22.90
	Kaithal Tollway Limited	Subsidiary	0.61	0.00
	Palshit Dankuni Tollway Private Limited	Subsidiary	1.54	1.54
	IRB Golconda Expressway Private Limted	Subsidiary	-	
	IRB Lalitpur Tollway Private Limted	Subsidiary	0.01	
	MMK Toll Road Private Limited	Investment Manager	-	0.08
12	**Interest Receivable**		**16,861.08**	**7,681.04**
	Solapur Yedeshi Tollway Limited	Subsidiary	1,044.25	539.90
	Yedeshi Aurangabad Tollway Limited	Subsidiary	1,104.29	485.27
	Kaithal Tollway Limited	Subsidiary	3,248.81	2,112.74
	IRB Westcoast Tollway Limited	Subsidiary	3,662.12	1,552.00
	AE Tollway Limited	Subsidiary	5,102.68	2,991.13
	Kishangarh Gulabpura Tollway Limited	Subsidiary	503.39	
	IRB Hapur Moradabad Tollway Limited	Subsidiary	1,059.85	
	IRB Golconda Expressway Private Limted	Subsidiary	1,135.69	
13	**BG Margin Receivable**		**30.95**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	30.95	-
14	**Trade payable**		**101.45**	**78.54**
	MMK Toll Road Pvt Limited	Investment Manager	101.45	78.54
15	**Unsecured Loan / other payable**		**-**	**4,872.91**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	-	4,872.91

Note 22 : Fair Values

Financial assets and liabilities

The carrying values of financials instruments of the trust are reasonable and approximations of fair values.

The accounting classification of each category of financial instruments, their carrying amounts and the categories of financial assets and liabilities measured at fair value, are set out below:

(Rs. in million)

	Carrying amount	Carrying amount	Fair Value	Fair Value
	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Financial assets				
Financial assets measured at amortised cost				
Investment in subsidiaries	44,794.18	94,424.44	44,794.18	94,424.44
Loans	1,62,994.46	35,772.98	1,62,994.46	35,772.98
Other financial assets	17,206.59	7,965.17	17,206.59	7,965.17
Cash and cash equivalents	28.55	6.56	28.55	6.56
Other Bank balances	2,532.30	-	2,532.30	-
Financial assets measured at fair value through statement of Profit & Loss				
Investments in Mutual funds	5,676.72	20.08	5,737.32	20.08
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	101.81	81.35	101.81	81.35
Borrowings (net of Tranasaction cost)	62,579.70	4,872.91	62,579.70	4,872.91
Financial liabilities				
Financial liabilities measured at fair value through statement of Profit & Loss				
Other financial liabilities	37,489.82	35,778.03	37,489.82	35,778.03

The management assessed that the fair value of other financials assets, trade receivables, cash and cash equivalents, other bank balance, trade payables, borrowings and other financial liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.
The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the trust has determined that market participants would take into account when pricing the investments.

Note 23 : Fair Value Hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price is active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly.

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

There were no transfers between Level 1, Level 2 and Level 3 during the period.

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of December 31, 2023:

(Rs. in million)

	As on December 31, 2023 (Unaudited)	Fair value measurement at end of the reporting period using		
		Level 1	Level 2	Level 3
Assets				
Investments in mutual fund (Quoted)	5,737.32	5,737.32	-	-
Liabilities				
Other financial liabilities	37,489.82	-	-	37,489.82

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2023:

(Rs. in million)

	As on March 31, 2023 (Audited)	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments in mutual fund (Quoted)	20.08	20.08	-	-
Liabilities				
Other financial liabilities	35,778.03	-	-	35,778.03

There has been no transfer between Level 1, Level 2 & Level 3 during the period.
Sensitivity: Higher probability by 5% and lower discount rate by 0.5% will increase the fair value by Rs.4,446.51 million (31 March 2023 - Rs.4,166.87 million). Lower probability by 5% and higher discount rate by 0.5% will reduce fair value by Rs.4,197.70 million (31 March 2023 - Rs.3,946.06 million).

Fair value movement for Payable to IRB Infrastructure Developers Limited is as under:

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Opening balance as at 1st April 2023 (Previous period: 1st April 2022)	35,778.03	35,168.79
Add: Recognised during the period/ year	1,676.37	560.53
Less: Payment of deferred consideration	-	-
Add: Adjustment on account of interest unwinding	35.42	48.71
Closing balance of payable as on December 31, 2023 (Previous period: March 31, 2023)	**37,489.82**	**35,778.03**

Note 24 : Taxes

In accordance with section 10 (23FC) of the Income Tax Act, the income of business trust in the form of interest received or receivable from Project SPV is exempt from tax. Accordingly, the trust is not required to provide any current tax liability. Further, deferred tax assets on carry forward losses is not being created since there is no virtual certainty of reversal of the same in the near future.

Note 25 : Investment Management Fess

Pursuant to the terms of the Investment Management Agreement, the fees will be paid to the Investment Manager for the services provided by it ("Management Fees"). The Management Fees have been revised for the Financial Year with the approval of the Unitholders, where the votes cast by Unitholders so entitled and voting in favor of a resolution are not less than one-and-a-half times the votes cast against such resolution. Pursuant to a resolution of the Unitholders, the Management Fees for the period ended December 31, 2023 has been revised to Rs. 122.60 million

Note 26 : Liquidity Risk

Liquidity risk

Liquidity risk is the risk that the trust may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The trust's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements.

The trust closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt and overdraft from banks at an optimised cost.

The liquidity risk is managed on the basis of expected maturity dates of the financial liabilities. The average credit period taken to settle trade payables is about 30 to 90 days. The other payables are with short-term durations. The carrying amounts are assumed to be a reasonable approximation of fair value. The following table analyses financial liabilities by remaining contractual maturities:

(Rs. in million)

December 31, 2023	On demand	Less than 3 months	Less than 1 year	1 to 5 years	> 5 years	Total
Borrowings (Gross of unamortised transaction cost)	-	-	802.00	5,990.62	56,487.47	**63,280.09**
Other financial liabilities	-	-	-	37,489.82	-	**37,489.82**
Trade payables	-	-	101.81	-	-	**101.81**
Total	**-**	**-**	**903.81**	**43,480.44**	**56,487.47**	**1,00,871.73**

March 31, 2023	On demand	Less than 3 months	Less than 1 year	1 to 5 years	> 5 years	Total
Borrowings (Gross of unamortised transaction cost)	-	-	4,872.91	-	-	**4,872.91**
Other financial liabilities	-	-	-	35,778.03	-	**35,778.03**
Trade payables	-	0.01	50.56	30.78	-	**81.35**
Total	**-**	**0.01**	**4,923.47**	**35,808.80**	**-**	**40,732.29**

At present, the trust does expects to repay all liabilities at their contractual maturity. In order to meet such cash commitments, the operating activity is expected to generate sufficient cash inflows.

Note 27 : Distribution made

(Rs. in million)

	December 31, 2023 (Unaudited)	March 31, 2023 (Audited)
Distributed during the period as :		
Interest	449.55	-
Return of Capital	1,103.43	-
	1,552.97	**-**

Note: The Board of Directors of the Investment Manager have declared 1st Distribution of Rs.1.52 per unit which comprises of Rs.0.44 per unit as interest and Rs. 1.08 per unit as return of capital in their meeting held on October 25, 2023.

Note 28 : Debt payment history

(Rs. in million)

Particulars	Opening Balance as on April 1, 2023	Loan availed during the period	Loan repaid during the period	Closing Balance as at December 31, 2023
Secured loan from Bank and Financial Institution (Gross of unamortised transaction cost)	-	63,677.20	(400.36)	63,276.84
Loan from related party	4,872.91	-	(4,872.91)	-
Total	**4,872.91**	**63,677.20**	**(5,273.27)**	**63,276.84**

Particulars	Opening Balance as on April 1, 2022	Loan availed during the period	Loan repaid during the period	Closing Balance as at March 31, 2023
Secured loan from Bank and Financial Institution (Gross of unamortised transaction cost)	-	-	-	-
Loan from related party	3,607.93	1,532.48	(267.50)	4,872.91
Total	**3,607.93**	**1,532.48**	**(267.50)**	**4,872.91**

Note 29 : Subsequent Events

The Board of Directors of the Investment Manager have declared 2nd Distribution of Rs.2.82 per unit towards return of capital in their meeting held on January 25, 2024, subsequently February 1, 2024 has been fixed as the record date for the purpose of payment of this distribution.

Note 30 : Previous year comparatives

Previous year figures have been converted to make them comparable with the current period as per InvIT regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

For M S K A & Associates
Chartered Accountants
ICAI registration number: 105047W

SD/-
Nitin Tiwari
Partner
Membership No. 118894

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : March 08, 2024

Place: Mumbai
Date : March 08, 2024

INDEPENDENT AUDITOR'S REPORT

To the Unit Holders of IRB Infrastructure Trust

REPORT ON THE AUDIT OF THE STANDALONE IND AS FINANCIAL STATEMENTS

OPINION

We have audited the accompanying Standalone Ind AS Financial Statements of IRB Infrastructure Trust ("the InvIT" or "the Trust"), which comprise the Standalone Balance Sheet as at March 31, 2023, the Standalone Statement of Profit and Loss (including Other Comprehensive Income), the Standalone Statement of Cash Flows, the Standalone Statement of Changes in Unit Holders' Equity and the Standalone Statement of Net Assets at Fair value as at March 31, 2023 and the Standalone Statement of Total Returns at Fair Value and the Standalone Statement of Net Distributable Cash Flows ('NDCFs') for the year then ended, and notes to the Standalone Financial Statements including a Summary of Significant Accounting Policies and Other Explanatory Information (hereinafter referred to as "the standalone financial statements").

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Standalone Financial Statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI InvIT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards (Ind AS) and/or any addendum thereto as defined in the rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended ("Ind AS") and other accounting principles generally accepted in India, of the State of Affairs of the Trust as at March 31, 2023, its profits and total comprehensive income, movement of Unit Holders' fund and its Cash flows for the year ended March 31,2023, its Net Assets at fair value as at March 31, 2023, its total returns at Fair Value and the net distributable cash flow for the year ended on that date.

BASIS FOR OPINION

We conducted our audit of the Standalone Financial Statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Standalone Financial Statements section of this report. We are independent of the Trust in accordance with the code of ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Standalone Financial Statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the Standalone Financial Statements.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Standalone Financial Statements of the financial period. These matters were addressed in the context of our audit of the Standalone Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

<table>
<tr><th>PARTICULARS</th><th>HOW THEY WERE ADDRESSED IN OUR AUDIT</th></tr>
<tr><td>1. <u>Loss on fair value measurement of other payable / deferred consideration payable to IRB Group.</u>

Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims.

Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims.

Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head ‘Loss on fair value measurement of other payable’.</td><td>We reviewed the Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs.
We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made.
We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein.
We also reviewed the reasonableness of the variables applied in the said computation.
Based on the above, the fair value of liability to the Sponsor, as estimated by the valuer, taking into consideration the weighted average of probabilities of realization has been validated.</td></tr>
<tr><td>2. <u>Impairment Testing</u>

The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment.

The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights.

Accordingly, the evaluation of impairment of toll collection rights has been determined as a Key Audit Matter.</td><td>We evaluated management’s assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management.
Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue.
Evaluated the potential changes in major components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were suitable.
Assessed the appropriateness of the weighted average cost of capital used in determining recoverable amount.
Performed sensitivity analysis of key assumptions used in valuation.
Tested the arithmetical accuracy of the model.</td></tr>
</table>

INFORMATION OTHER THAN THE STANDALONE FINANCIAL STATEMENTS AND AUDITOR'S REPORT THEREON

The Board of Directors of Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations, but does not include the standalone financial statements and our report thereon.

Our opinion on the standalone financial statements does not cover the other information and we do not express any form of assurance conclusion thereon. In connection with our audit of the standalone financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the standalone financial statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF THE BOARD OF DIRECTORS OF INVESTMENT MANAGER FOR THE STANDALONE FINANCIAL STATEMENTS

The Board of Directors of Investment Manager is responsible for the preparation of these Standalone Financial Statements that give a true and fair view of the Standalone financial position as at 31 March 2023, financial performance including other comprehensive income, movement of Unit Holders' fund and its Cash flows for the year ended March 31, 2023, its Net Assets at fair value as at March 31, 2023, its total returns at Fair Value and the net distributable cash flow of the trust for the year ended March 31, 2023 in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified and/or any addendum thereto as defined in Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended read with the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulation 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "InvIT Regulations").

This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the InvIT Regulations for safeguarding of the assets of the Trust and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the Standalone financial statements that give a true and fair view and are free from material misstatement, whether due to fraud and error.

In preparing the Standalone Financial Statements, the Board of Directors of Investment Manager is responsible for assessing the Trust's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager either intends to liquidate the Trust or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of Investment Manager are also responsible for overseeing the Trust's financial reporting process.

AUDITOR'S RESPONSIBILITY FOR THE AUDIT OF THE STANDALONE IND AS FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance whether the Standalone Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also,

- Identify and assess the risks of material misstatement of the standalone financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.
- Obtain an understanding of internal financial control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of such controls.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Board of Directors of Investment Manager.
- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Trust's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Trust to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Materiality is the magnitude of misstatements in the standalone financial statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Standalone Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Based on our audit and as required by SEBI InvIT Regulations, we report that:

a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit;

b. The Balance Sheet and the Statement of Profit and Loss including other comprehensive income, dealt with by this Report are in agreement with the books of account of the Trust; and

c. In our opinion, the aforesaid standalone financial statements comply with the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For Gokhale & Sathe,
Chartered Accountants
Firm Registration No.: 103264W

SD/-
CA Kaustubh Deshpande,
Partner
Membership No. 121011
UDIN: 23121011BGXXWA9139
Date: 12th May 2023
Place: Mumbai

IRB Infrastructure Trust
Balance Sheet as at March 31, 2023

(Rs. in Millions)

		Note No.	As at March 31, 2023	As at March 31, 2022
I	**ASSETS**			
(1)	**Non-current assets**			
	Financial assets	4		
	i) Investments	4.1	94,424.44	90,929.80
	ii) Loans	4.2	30,351.69	30,302.98
	Total non-current assets		**1,24,776.13**	**1,21,232.78**
(2)	**Current assets**			
	Financial assets	5		
	i) Investments	5.1	20.08	20.04
	ii) Cash and cash equivalents	5.2	6.56	0.25
	iii) Loans	5.3	5,421.29	3,492.95
	iv) Other financial assets	5.4	7,965.17	5,610.67
	Other current assets	6	4.48	-
	Total current assets		**13,417.58**	**9,123.92**
	TOTAL ASSETS		**1,38,193.71**	**1,30,356.70**
II	**EQUITY AND LIABILITIES**			
	Equity			
	Unit capital	7	87,929.33	85,504.33
	Other equity	8	9,526.42	5,992.74
	Total unit holder's equity		**97,455.75**	**91,497.07**
(1)	**Non-current liabilities**			
	Financial liabilities			
	i) Other financial liabilities	9	35,778.03	35,168.79
	Total non- current liabilities		**35,778.03**	**35,168.79**
(2)	**Current liabilities**			
	Financial liabilities	10		
	i) Borrowings	10.1	4,872.91	3,607.93
	ii) Trade payables	10.2		
	small enterprises and small enterprises		0.01	-
	b) total outstanding dues of creditors other than micro enterprises and small enterprises		81.34	81.71
	Other Current liabilities	11	5.67	1.20
	Total current liabilities		**4,959.93**	**3,690.84**
	Total liabilities		**40,737.96**	**38,859.63**
	TOTAL EQUITY AND LIABILITIES		**1,38,193.71**	**1,30,356.70**
	Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 12.05.2023

Place : Mumbai
Date : 12.05.2023

IRB Infrastructure Trust
Statement of Profit and Loss for the year ended March 31, 2023

(Rs. in Millions)

	Note No.	For the year ended March 31, 2023	For the year ended March 31, 2022
Income			
Other income	12	4,222.87	4,200.44
TOTAL INCOME		**4,222.87**	**4,200.44**
Expenses			
Investment Manager Fees		56.52	42.48
Other expenses	13	617.34	2,182.21
TOTAL EXPENSES		**673.86**	**2,224.69**
Profit / (Loss) before tax		**3,549.01**	**1,975.75**
Tax expenses			
Profit / (Loss) after tax (A)		**3,549.01**	**1,975.75**
Other comprehensive income / (loss) for the year (net of tax)			
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)		-	-
Other comprehensive income/(loss) for the year (net of tax) (B)		-	-
Total comprehensive income for the year, net of tax : (A+B)		**3,549.01**	**1,975.75**
Earnings per unit			
Basic		**4.04**	**2.34**
Diluted		**4.04**	**2.34**
Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
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Company secretary
Membership No. A27833

Place: Mumbai
Date : 12.05.2023

Place: Mumbai
Date : 12.05.2023

IRB Infrastructure Trust

Statement of changes in Equity for the year ended March 31, 2023

(Rs. in Millions)

		As at March 31, 2023	As at March 31, 2022
a.	**Unit Capital**		
	At the beginning of the year	85,504.33	81,688.00
	Issued during the year	2,425.00	3,816.33
	At the end of the year	**87,929.33**	**85,504.33**
b.	**Other Equity**		
	Retained earnings		
	At the beginning of the year	5,992.74	4,020.25
	Profit for the year	3,549.01	1,975.75
	Unit issue expenses	(15.33)	(3.26)
	At the end of the year	**9,526.42**	**5,992.74**

Summary of Significant accounting policies (refer note no.3)

See accompanying notes to the financial statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 12.05.2023

Place : Mumbai
Date : 12.05.2023

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Statement of Net Asset at Fair Value

-

	As at March 31, 2023		As at March 31, 2022	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	1,38,193.71	1,87,704.45	1,30,356.70	1,50,647.12
B. Liabilities (at book value)	40,737.96	4,959.93	38,859.63	3,690.84
C. Net Assets (A-B)	97,455.75	1,82,744.52	91,497.07	1,46,956.29
D. Number of units (in millions)	879.29	879.29	855.04	855.04
E. NAV (C/D) (Amount in Rs.)	**110.83**	**207.83**	**107.01**	**171.87**

B. Statement of total returns at Fair Value

-

Particulars	**For the year ended March 31, 2023**	**For the year ended March 31, 2022**
Total Comprehensive Income (As per the Statement of Profit and Loss)	3,549.01	1,975.75
Add/(less): Other Changes in Fair Value	85,288.77	55,459.22
Comprehensive Income -	**88,837.78**	**57,434.97**

Notes :

Fair value of assets as at March 31, 2023 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

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Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 12.05.2023

Place: Mumbai
Date : 12.05.2023

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2023

(Rs. in Millions)

Particulars	For year ended March 31, 2023	For year ended March 31, 2022
Cash flow from operating activities		
Profit / (Loss) before tax	3,549.01	1,975.75
Adjustments to reconcile profit before tax to net cash flows:		
Fair value gain on investments	(0.18)	-
Profit on sale of investments	(0.92)	(0.40)
Fair value loss on measurement of other payable	560.53	2,161.31
Interest income on		
- Others	(4,221.77)	(4,200.00)
Operating profit/(loss) before working capital changes	**(113.33)**	**(63.33)**
Movement in working capital:		
Increase/(decrease) in trade payables	(0.36)	14.10
Increase/(decrease) in other financial liabilities	48.71	50.48
Increase/(decrease) in other current liabilities	4.48	(0.50)
(Increase)/decrease in Other current assets	(4.48)	0.03
(Increase)/decrease in loans	(1,928.34)	(1,682.67)
(Increase)/decrease in Other Financial assets	(229.72)	(0.89)
Cash generated from/(used in) operations	**(2,223.05)**	**(1,682.80)**
Direct taxes paid (net of refunds)	-	-
Net cash flows from/(used in) operating activities (A)	**(2,223.05)**	**(1,682.80)**
Cash flows from investing activities		
Investment in subsidiaries	(1,212.00)	(615.00)
Investment in sub debt of subsidiaries	(2,282.64)	(2,264.49)
Loan given to subsidiaries Long term	(48.71)	(48.71)
Interest received from related parties	2,097.00	825.00
Purchase of units of Mutual Fund	(302.98)	(383.38)
Proceeds on sale of units of Mutual Fund	304.04	413.74
Net cash flows from/(used in) investing activities (B)	**(1,445.29)**	**(2,072.84)**
Cash flow from financing activities		
Other Equity		
Proceeds from issuance of unit capital	2,425.00	3,816.33
Proceeds of curent borrowings	1,532.48	4,266.50
Repayment of curent borrowings	(267.50)	(4,336.33)
Unit Issue Expenses	(15.33)	(3.26)
Net cash flows from/(used in) financing activities (C)	**3,674.65**	**3,743.24**
Net increase/(decrease) in cash and cash equivalents (A+B+C)	**6.32**	**(12.40)**
Cash and cash equivalents at the beginning of the period	0.25	12.65
Cash and cash equivalents at the end of the period (refer 5.2)	**6.56**	**0.25**
Components of cash and cash equivalents		
Cash on hand	-	-
Balances with scheduled banks		
- On Current Account	6.56	0.25
Total Cash and cash equivalents (refer note 5.2)	**6.56**	**0.25**

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2023

Debt reconciliation statement in accordance with Ind AS 7

Particulars	**For year ended March 31, 2023**	**For year ended March 31, 2022**
Opening balances		
Long term borrowings	-	-
Short term borrowings	3,607.93	3,677.76
	-	-
Movements		
Long term borrowings	-	-
Short term borrowings	(1,264.98)	69.83
	-	-
Closing balances		
Long term borrowings	-	-
Short term borrowings	4,872.91	3,607.93

Summary of significant accounting policies (refer note 3)

See accompanying notes to the financial statements.

Notes:

1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. Reconciliation between opening and closing balances for liabilities arising from financing activities
4. The cash flow statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows" as notified under section 133 of the Companies Act, 2013.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 12.05.2023

Place : Mumbai
Date : 12.05.2023

Additional Disclosures as required by Paragraph 6 of Annexure A to SEBI Circular No. CIR/IMD/DF/127/2016:

a) Net Distributable Cash Flows as at the Standalone Trust level

(Rs. in millions)

Sr. No.	Particulars	Year ended March 31, 2023#	Year ended March 31, 2022
1	Cash flows received from Project SPVs in the form of Interest (Refer note 1)	2,097.00	825.00
2	Cash flows received from Project SPVs in the form of Dividend	-	-
3	Any other income accruing at the Trust level and not captured above, including but not limited to interest/return on surplus cash invested by the Trust	0.92	0.40
4	Cash flows received from the project SPVs towards the repayment of the debt issued to the Project SPVs by the Trust (Net) (Refer note 2)	(1,928.34)	(1,682.67)
5	**Total cash inflow at the Trust level (A)**	**169.58**	**(857.27)**
	Less:		
6	Any payment of fees, interest and expense incurred at the Trust level, including but not limited to the fees of the Investment Manager	(113.33)	(63.38)
7	Income tax (if applicable) at the Standalone Trust Level	-	-
8	Repayment of external debt	-	-
9	**Total cash outflows / retention at the Trust level (B)**	**(113.33)**	**(63.38)**
10	**Net Distributable Cash Flows (C) = (A+B)**	**56.25**	**(920.65)**

The said amount would be utilised towards Capex in ongoing projects.

Notes:

1 Excludes interest due but not received of Rs. 2,124.77 millions and Rs. 3,375 Millions for the year ended March 31, 2023 and year ended March 31, 2022.

2 Netted - off with disbursement of short-term unsecured loan to project SPV.

IRB Infrastructure Trust

Notes to financial statements for the year ended March 31, 2023

1. **Trust Information and Nature of Operations**

IRB Infrastructure Trust (the "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under Indian Trust Act, 1882 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Trust is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registration certificate from SEBI having registration number IN/InviT/19-20/0012.

The Trust has been formed to invest in infrastructure assets primarily being in the road sector in India. The Trust's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Trust's portfolio comprises of ten road projects as listed below:-

The Trust had acquired the projects at Sr no 1 to 9 from the Sponsor which are road infrastructure projects developed on DBFOT basis. The SPV at Sr. no 10 has been added to portfolio from 02.04.2022.

Sr. No.	Project SPV Name
1	AE Tollway Limited (AETL)
2	CG Tollway Limited (CGTL)
3	IRB Hapur Moradabad Tollway Limited (IRBHMTL)
4	IRB Westcoast Tollway Limited (IRBWTL)
5	Kishangarh Gulabpura Tollway Limited (KGTL)
6	Kaithal Tollway Limited (KTL)
7	Solapur Yedeshi Tollway Limited (SYTL)
8	Udaipur Tollway Limited (UTL)
9	Yedeshi Aurangabad Tollway Limited (YATL)
10	Palsit Dankuni Tollway Private Limited(PDTPL) (w.e.f. 02.04.2022)

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.

The financial statements were authorised for issue in accordance with resolution passed by the board of directors of the Investment manager on May 12, 2023.

The Trust has been listed on NSE w.e.f. 03.04.2023

2. Basis of preparation

The financial statements of IRB Infrastructure Trust have been prepared in accordance with Indian Accounting Standards as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended, prescribed under Section 133 of the Companies Act, 2013 ("Ind AS") read with SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended and the circulars issued thereunder ("InvIT Regulations") and other accounting principles generally accepted in India.

The financial statements have been prepared on an accrual basis and under the historical cost convention except for certain financial assets and liabilities (refer accounting policy regarding financial instruments) which have been measured at fair value.

The financial statements are presented in Indian Rupee ('INR') which is the functional currency of the Trust and all values are rounded to the nearest millions, except when otherwise indicated. Wherever the amount represented '0' (zero) construes value less than Rupees five thousand.

3. Summary of significant accounting policies

3.1. Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the results of operations during the reporting period end. Although these estimates are based upon management's best knowledge of current events and actions, actual results could differ from these estimates.

3.2. Current versus non-current classification

The Trust presents assets and liabilities in the balance sheet based on current/ non-current classification.
An asset is treated as current when it is:
- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading

- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities respectively.

The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents. The Trust has identified twelve months as its operating cycle.

3.3. Revenue recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Trust and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the transaction price of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duties collected on behalf of the government.

The specific recognition criteria described below must also be met before revenue is recognised:

Interest income
Revenue is recognised on a time proportion basis taking into account the amount outstanding and the rates applicable. For all debt instruments measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR).

Dividends
Revenue is recognised when the Trust's right to receive the payment is established, which is generally when shareholders approve the dividend.

3.4. Taxes

Current income tax
Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Trust operates and generates taxable income.

Current income tax relating to items recognised outside the Statement of Profit and Loss is recognised outside the Statement of Profit and Loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax
Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:
- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction affects neither the accounting profit nor taxable profit or loss

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity).

Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

3.5. Goods and Services Tax (GST) paid on acquisition of assets or on incurring expenses

Expenses and assets are recognised net of the amount of goods and service tax paid, except:

When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet.

3.6. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of Trusts. Borrowing cost also includes exchange differences to the extent regarded as an adjustment to the borrowing costs.

3.7. Provisions

Provisions are recognised when the Trust has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Trust expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the Statement of Profit and Loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

3.8. Contingent liabilities and contingent assets

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Trust or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a

liability that cannot be recognised because it cannot be measured reliably. The Trust does not recognise a contingent liability but discloses its existence in the financial statements.
A contingent asset is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.
Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.9. Financial instrument

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement
All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through Statement of Profit and Loss, directly attributable transaction cost to the acquisition of the financial asset. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognised on the trade date, i.e., the date that the Trust commits to purchase or sell the asset.

Subsequent measurement
For purposes of subsequent measurement, financial assets are classified in following categories;
- at amortised cost
- at fair value through profit or loss (FVTPL)
- at fair value through other comprehensive income (FVTOCI)

Financial Assets at amortised cost
A financial asset is measured at the amortised cost if both the following conditions are met:
a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

This category is the most relevant to the Trust. All the Loans and other receivables under financial assets (except Investments) are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

After initial measurement such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The losses arising from impairment are recognised in the Statement of Profit and Loss.

Financial Assets at Fair Value through Statement of Profit and Loss/Other comprehensive income

All investments in scope of Ind AS 109 are measured at fair value. The Trust has investment in Debt oriented mutual Trust which are held for trading, are classified as at FVTPL. The Trust makes such election on an instrument by instrument basis. The classification is made on initial recognition and is irrevocable. The gain/ loss on sale of investments are recognised in the Statement of Profit and Loss.
Instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of Profit and Loss.

Derecognition

A financial asset is primarily derecognised (i.e. removed from the Trust's balance sheet) when:
The rights to receive cash flows from the asset have expired, or
The Trust has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Trust has transferred substantially all the risks and rewards of the asset, or (b) the Trust has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Trust has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Trust continues to recognise the transferred asset to the extent of the Trust's continuing involvement. In that case, the Trust also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Trust has retained.

3.10. Impairment of assets

Impairment of financial assets

Expected credit losses are recognized for all financial assets subsequent to initial recognition other than financial assets in FVTPL category.

For financial assets other than trade receivables, as per Ind AS 109, the Trust recognizes 12 month expected credit losses for all originated or acquired financial assets if at the reporting date the credit risk of the financial asset has not increased significantly since its initial recognition. The expected credit losses are measured as lifetime expected credit losses if the credit risk on financial assets increases significantly since its initial recognition.

The impairment losses and reversals are recognized in Statement of Profit and Loss.

Impairment of non-financial assets

The Trust assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Trust estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset unless the asset does not generate cash inflows that are largely independent of those from other assets or Trust's assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Trust's financial liabilities include trade and other payables, loans and borrowings.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Trust that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the statement of profit and loss.

Loans and borrowings

This is the category most relevant to the Trust. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are de-recognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

De-recognition
A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the statement of profit and loss.

Offsetting of financial instruments
Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.10 Investment in subsidiaries

Investments (equity instruments as well as subordinate debt) in subsidiaries are carried at cost less accumulated impairment losses, if any. Where an indication of impairment exists, the carrying amount of the investment is assessed and written down immediately to its recoverable amount. On disposal of investments in subsidiaries, the difference between net disposal proceeds and carrying amounts are recognised in the Statement of Profit and Loss.

3.11Foreign currencies

The Trust's financial statements are presented in INR, which is also the Trust's functional currency. The Trust does not have any foreign operation and has assessed the functional currency to be INR.

Transactions and balances
Transactions in foreign currencies are initially recorded by the Trust at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

3.12 Fair value measurement

The Trust measures financial instruments, such as, derivatives at fair value at each balance sheet date.
Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

► In the principal market for the asset or liability, or
► In the absence of a principal market, in the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible by the Trust.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Trust uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

► Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities
► Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
► Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Trust determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Trust's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Trust's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management of Investment Manager presents the valuation results to the Audit Committee and the Trust's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Trust has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.

- Disclosures for valuation methods, significant estimates and assumptions (note 28)
- Financial instruments (including those carried at amortised cost) (note 24 and 25)
- Quantitative disclosure of fair value measurement hierarchy (note 24 and 25)

3.13 Contributed Equity

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

3.14 Distribution to unit holders

The Trust recognises a liability to make cash distributions to unit holders when the distribution is authorised and a legal obligation has been created. As per the InvIT Regulations, a distribution is authorised when it is approved by the Board of Directors of the Investment Manager. A corresponding amount is recognised directly in equity.

3.15 Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.
For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, net of outstanding bank overdrafts as they are considered an integral part of the Trust's cash management.

3.16 Earnings Per Unit (EPU)

Basic earnings per unit are calculated by dividing the net profit for the year attributable to unit holders by the weighted average number of units outstanding during the year.

For the purpose of calculating diluted earnings per unit, the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

3.17 Segment Information

The Trust is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Trust's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

3.17 New pronouncements issued but not effective

Ministry of Corporate Affairs ("MCA") notifies new standards or amendments to the existing standards under Companies (Indian Accounting Standards) Rules as issued from time to time. On March 31, 2023, MCA amended the Companies (Indian Accounting Standards) Amendment Rules, 2023, as below:

Ind AS 1: Disclosure of Material Accounting policy information and similar consequential amendment to Ind AS 34.

Ind AS 1: Disclosure of the judgements, apart from those involving estimations, that management has made in the process of applying the entity's accounting policies and that have the most significant effect on the amounts recognised in the financial statements.

Ind AS 8: Definition of Accounting Estimate as "Accounting estimates are monetary amounts in financial statements that are subject to measurement uncertainty". Further amendments to paragraphs delineating Changes to Accounting Estimates.

Ind AS 12: Amendments to taxable temporary difference, initial recognition of asset or liability and Deductible taxable differences.

Ind AS 12: Deferred tax related to assets and liabilities arising from Single Transaction.

Ind AS 107: Information about measurement basis (or bases) for financial instruments to be disclosed as material accounting policy.

Ind AS 109: Amendment to paragraph on reassessment of embedded derivative.

Ind AS 115: Amendments to Appendix 1 which gives there in the major differences, if any, between Indian Accounting Standard (Ind AS) 115 and the corresponding International Financial Reporting Standard (IFRS) 15, Revenue from Contracts with Customers, IFRIC 12, Service Concession Arrangements and SIC 29 Service Concession Arrangements: Disclosures, issued by the International Accounting Standards Board

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
Note 4 : Financial assets (Non-current)		
4.1 Investments		
A) Investments at cost		
Investments in equity instruments of subsidiaries (unquoted)		
436,500,000 equity shares of AE Tollway Limited	4,365.00	4,365.00
203,500,000 equity shares of CG Tollway Limited	2,035.00	2,035.00
371,500,000 equity shares of IRB Hapur Moradabad Tollway Limited	3,715.00	3,715.00
174,194,303 equity shares of IRB Westcoast Tollway Limited	1,741.94	1,741.94
155,500,000 equity shares of Kishangarh Gulabpura Tollway Limited	1,555.00	1,555.00
328,000,000 equity shares of Kaithal Tollway Limited	3,280.00	3,280.00
98,250,000 equity shares of Solapur Yedeshi Tollway Limited	982.50	982.50
116,800,000 equity shares of Udaipur Tollway Limited	1,168.00	1,168.00
215,757,001 equity shares of Yedeshi Aurangabad Tollway Limited	2,157.57	2,157.57
121,200,000 equity shares of Palshit Dankuni Tollway Private Limited	1,212.00	-
Investments in subsidiaries (unquoted)	**22,212.01**	**21,000.01**
Other equity instruments (unquoted) (FVTOCI)		
B) Investments at cost		
B) Investments in sub debt of subsidiaries (unquoted)		
AE Tollway Limited	10,265.88	10,265.88
CG Tollway Limited	2,727.80	2,727.80
IRB Hapur Moradabad Tollway Limited	9,798.52	9,414.76
IRB Westcoast Tollway Limited	12,203.92	12,203.92
Kishangarh Gulabpura Tollway Limited	2,495.38	1,809.50
Kaithal Tollway Private Limited	4,426.04	4,426.04
Solapur Yedeshi Tollway Limited	4,423.70	4,423.70
Udaipur Tollway Limited	8,338.40	8,338.40
Yedeshi Aurangabad Tollway Limited	16,319.79	16,319.79
Palshit Dankuni Tollway Private Limited	1,213.00	-
Subordinated Debt to Related parties (Interest free)	**72,212.43**	**69,929.79**
Total non-current investments (A + B)	**94,424.44**	**90,929.80**
Aggregate amount of unquoted investments	**94,424.44**	**90,929.80**

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
4.2 Loans		
(Unsecured, considered good, unless otherwise stated)		
	-	-
AE Tollway Limited	9,528.41	9,528.41
IRB Westcoast Tollway Limited	4,000.00	4,000.00
Kaithal Tollway Limited	8,471.59	8,471.59
Solapur Yedeshi Tollway Limited	4,000.00	4,000.00
Yedeshi Aurangabad Tollway Limited	4,000.00	4,000.00
Less: Current maturities of loan to related parties	-	-
- Interest free	-	-
Kaithal Tollway Limited	351.69	302.98
Total	**30,351.69**	**30,302.98**

	As at March 31, 2023	As at March 31, 2022
Note 5 : Financial assets (current)		
5.1 Investments		
Investments at fair value through Profit & Loss		
Investments in mutual fund (quoted)		
Investments in Mutual Funds (quoted) (FVTPL)	20.08	20.04
(SBI Liquid Fund Direct Growth - March 31,2023 - 3333.09 units)		
	20.08	**20.04**
5.2 Cash and cash equivalent		
Balances with banks:		
- In current accounts	6.56	0.25
	6.56	**0.25**

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
5.3 Loans		
(Secured, considered good, unless otherwise stated)		
(Unsecured, considered good, unless otherwise stated)		
Loans to related parties		
AE Tollway Limited	478.89	478.89
IRB Hapur Moradabad Tollway Limited	-	37.26
IRB Westcoast Tollway Limited	2,348.08	1,116.98
Kaithal Tollway Limited	156.71	681.81
Solapur Yedeshi Tollway Limited	24.00	24.00
Udaipur Tollway Limited	1,335.31	214.41
CG Tollway Limited	558.50	316.30
Kishangarh Gulabpura Tollway Limited	-	106.00
Yedeshi Aurangabad Tollway Limited	519.80	517.30
	5,421.29	**3,492.95**
5.4 Other financial assets		
(Unsecured, considered good, unless otherwise stated)		
Interest receivable from others	7,681.04	5,556.27
Other receivables		
- related parties	284.13	54.40
	7,965.17	**5,610.67**
Note 6 : Other current assets		
Duties and taxes receivable	3.30	-
Prepaid expenses	1.18	-
Total	**4.48**	**-**

IRB Infrastructure Trust

Notes to financial statement for the year ended March 31, 2023

Note 7 : Equity

(Rs. in Millions)

	As at March 31 ,2023	As at March 31,2022
I. Unit capital		
a. Issued, subscribed and fully paid up Unit Capital		
Unit capital of Rs. 100 each issued, subscribed and fully paid up		
At the beginning the year	85,504.33	81,688.00
Issued during the year	2,425.00	3,816.33
At the end of the year	**87,929.33**	**85,504.33**

II. Reconciliation of the number of units outstanding and the amount of unit capital:

	As at March 31 ,2023		As at March 31,2022	
	No. of units	Amount in Millions	No. of units	Amount in Millions
At the beginning of the year	85,50,43,265	85,504.33	81,68,80,000	81,688.00
Issued during the year	2,42,50,000	2,425.00	3,81,63,265	3,816.33
At the end of the year	**87,92,93,265**	**87,929.33**	**85,50,43,265**	**85,504.33**

III. Details of Promoter

	As at March 31 ,2023		As at March 31,2022	
	No. of units	%	No. of units	%
IRB Infrastructure Developers Limited	44,84,39,840	51%	43,60,72,332	51%
Anahera Investments Pte Ltd	21,98,23,181	25%	21,37,60,685	25%
Bricklayers Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Chiswick Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Stretford End Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Dangenham Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Total	**87,92,93,265**	100%	**85,50,43,265**	100%

Note :8 Other Equity

	As at March 31 ,2023	As at March 31,2022
Retained earnings		
At the beginning of the year	5,992.74	4,020.25
Profit/(loss) for the year	3,549.01	1,975.75
Unit issue expenses	(15.33)	(3.26)
Total Other Equity	**9,526.42**	**5,992.74**

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
9 Other financial liabilities		
Other Payable		
- related party	35,778.03	35,168.79
	35,778.03	**35,168.79**
Note 10 : Current financial liabilities		
10.1 Borrowing		
Unsecured loan		
Loan from related parties		
- Interest free	4,872.91	3,607.93
Total	**4,872.91**	**3,607.93**
10.2 Trade Payables		
a) total outstanding dues of micro enterprises and small enterprises	0.01	-
b) Total outstanding dues of creditors other than micro and small enterprises		
- related parties	78.54	80.31
- others	2.80	1.40
Total	**81.35**	**81.71**
Note 11 : Other current liabilities		
Statutory dues payable (including PF, TDS, GST & others)	5.67	1.20
Total	**5.67**	**1.20**

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2023

(Rs. in Millions)

	For the year ended March 31, 2023	For the year ended March 31, 2022
Note 12 : Other income		
Interest income on		
Interest income from Related parties	4,221.77	4,200.00
Gain on sale of investment	0.92	0.40
Fair value gain on investments	0.18	0.04
	4,222.87	**4,200.44**
Note 13 : Other expenses		
Rates & taxes	0.60	4.73
Legal and professional fees	54.19	15.49
Payment to auditor (refer note below)	1.63	0.64
Bank charges	0.03	0.03
Miscellaneous expenses	0.36	-
Fair value loss on measurement of other payable	560.53	2,161.31
	617.34	**2,182.21**
Payment to auditor		
- Statutory audit fees	0.29	0.27
Special audit fees	0.80	-
- Limited review fees	0.42	0.36
- Other services (certification fees)	0.42	-
Reimbursement of expenses	0.09	0.01
	2.03	**0.64**

Note 14 : Earnings per unit (EPU)

The following reflects the income and unit data used in the basic and diluted EPU computations:

(Rs. in Millions)

	For the year ended March 31, 2023	For the year ended March 31, 2022
Profit attributable to unit holders of the Trust for basic & diluted earnings	3,549.01	1,975.75
Weighted average number of unit for basic & diluted EPU* (in Millions)	**87,79,64,498**	**84,29,14,666**
Basic earning per unit (Amount in Rs.)	4.04	2.34
Diluted earning per unit (Amount in Rs.)	4.04	2.34

Note 15 : Capital and other commitments

There are no capital and other commitments as at March 31, 2023. (As on 31.03.2022 Nil)

Note 16 :Contingent liabilities

The Trust has provided Corporate guarantee for the subsidiary companies i.e. SYTL and YATL in respect of the NCDs issued during the FY 2022-23.. (As on 31.03.2022 Nil)

Note 17 : Details of dues to micro and small enterprises as per MSMED Act, 2006

The following details regarding Micro and small Enterprises has been determined to the extent such parties has been identified on the basis of information available with the Trust.

(Rs. in Millions)

Particulars	As at March 31, 2023	As at March 31, 2022
Principal amount remaining unpaid to any supplier as at the period end	0.01	-
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

a) MSME ageing schedule as at

Particulars	As at March 31, 2023	As at March 31, 2022
MSME disputed Dues	-	-
MSME Undisputed Dues	-	-
Less than 1 year	0.01	-
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total dues to micro and small enterprises as per MSMED Act, 2006	**0.01**	**-**

b) Ageing of creditors other than micro enterprises and small enterprises as at

Particulars	As at March 31, 2023	As at March 31, 2022
disputed Dues		
Undisputed Dues		
Less than 1 year	50.56	35.28
1-2 Years	30.78	46.43
2-3 Years		
More than 3 years		
Total dues to creditors other than micro enterprises and small enterprises as at	**81.34**	**81.71**
b) out of the above unbilled amount	0.27	0.87

IRB Infrastructure Trust

Notes to financial statement for the year ended March 31, 2023

Note 18 : Operating segment

The Trust is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Trust's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

Note 19 : Other Statutory Information

i) The Trust have not traded or invested in Crypto currency or Virtual Currency during the financial year.

ii) The Trust does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the Trust.

iii) The Trust does not have any transactions with companies struck off.

iv) The Trust does not have any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961 (such as, search or survey or any other relevant provisions of the Income Tax Act, 1961.

v) The Trust did not have any long-term contracts including derivative contract for which there were any material foreseeable losses.

vi) The Trust has not declared a wilfull defaulter by any bank / financial institution or any other lender during the year.

Note 20 : Loans or advances to specified persons

(Rs. in Millions)

Types of borrower	As at March 31, 2023		As at March 31, 2022	
	Amount outstanding*	% of Total ^	Amount outstanding*	% of Total ^
Promoters	-	-	-	-
Directors	-	-	-	-
KMPs	-	-	-	-
Related Parties	35,772.98	100%	33,795.94	100%
Total aggregate loans	**35,772.98**	**100%**	**33,795.94**	**100%**

* represents loan or advance in the nature of loan

^ represents percentage to the total Loans and Advances in the nature of loan

Note 21 : Particulars in respect of loans and advances in the nature of loans given to subsidiaries as required by Regulation 53(f) of the SEBI (Listing Obligation and Disclosure Requirements) Regulation, 2015

	As at March 31, 2023		As at March 31, 2022	
	Balances outstanding	Maximum balance Outstanding during the year	Balances outstanding	Maximum balance Outstanding during year
AE Tollway Limited	10,007.30	10,007.30	10,007.30	10,007.30
Kaithal Tollway Limited	8,979.99	9,456.38	9,456.38	9,456.38
Kishangarh Gulabpura Tollway Limited	-	106.00	106.00	106.00
Udaipur Tollway Limited	1,335.31	1,335.31	214.41	214.41
CG Tollway Limited	558.50	558.50	316.30	316.30
IRB Hapur Muradabad Tollway Limited	-	-	37.26	37.26
IRB Westcoast Tollway Limited	6,348.08	6,348.08	5,116.98	5,116.98
Solapur Yedeshi Tollway Limited	4,024.00	4,024.00	4,024.00	4,024.00
Yedeshi Aurangabad Tollway Limited	4,519.80	4,519.80	4,517.30	4,517.30

Note 22 : Basis of preparation of financial statements

The Trust has presented these standalone financial information (for all the periods presented there in) in accordance with the requirement of SEBI (Infrastructure Investment Trusts) Regulations, 2014.

Note 23 : Related party transaction

I. List of Related Parties

i. Subsidiaries/ SPVs

AE Tollway Limited
CG Tollway Limited
Hapur Muradabad Tollway Limited
IRB Westcoast Tollway Limited
Kishangarh Gulabpura Tollway Limited
Kaithal Tollway Private Limited
Solapur Yedeshi Tollway Limited
Udaipur Tollway Limited
Yedeshi Aurangabad Tollway Limited
Palsit Dankuni Tollway Private Limited

ii. Parties to the Fund *

IRB Infrastructure Developers Limited (Sponsor and Project Manager)
MMK Toll Road Private Limited (Investment Manager)
IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)

iii. Subsidiaries Company of Sponsor and Project Manager

Mhaiskar Infrastructure Private Limited
Modern Road Makers Private Limited
IRB Goa Tollway private Limited

***As per Invit Regulation**

iii. Promoters/ Directors of the parties to the Fund specified in (ii) above

Particulars	IRB Infrastructure Developers Limited (Sponsor and Project Manage)	MMK Toll Road Private Limited (Investment Manager)	IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
Promoters	Mr. Virendra D. Mhaiskar	IRB Infrastructure Developers Limited	IDBI Bank Limited
	Mrs. Deepali V. Mhaiskar		Life Insurance Corporation of India
	Virendra D. Mhaiskar HUF		General Insurance Corporation of India
Directors	Mr. Virendra D. Mhaiskar, Chairman and Managing Director	Virendra D Mhaiskar	Mr. Samuel Joseph Jebaraj
	Mrs. Deepali V. Mhaiskar, Whole Time Director	Mr. Kunnasagaran Chinniah	Mr. Pradeep Kumar Jain
	Mr. Jose Tamariz Martel Goncer		Mrs. Jayashree Vijay Ranade
	Mr. Ravindra Dhariwal		Mr. Pradeep Kumar Malhotra
			Ms. Baljinder Kaur Mandal
	Independent directors	**Independent directors**	
	Mr. Chandrashekhar S. Kaptan	K G Krishnamurthy	
	Mr. Sunil H. Talati	Ranjana Paranjape	
	Mr. Sandeep J. Shah		
	Ms. Priti Savla, Independent Director (wef February 10, 2022)		
	Mrs. Heena Raja, Independent Director (utpo February 10, 2022)		

Associates	**A) Holding Company of Sponsor / Project Manager** IRB Holding Private Limited (Formerly Mhaiskar Ventures Private Limited) **B) Subsidiary Companies of Sponsor /** Ideal Road Builders Private Limited (IRBPL) Mhaiskar Infrastructure Private Limited Modern Road Makers Private Limited Aryan Toll Road Private Limited (ATRPL) ATR Infrastructure Private Limited (ATRFL) IRB Infrastructure Private Limited (IRBFL) Thane Ghodbunder Toll Road Private Limited (TGTRPL) Aryan Infrastructure Investments Private Limited (AIIPL) IRB MP Expressway Private Limited MMK Toll Road Private Limited (MMK) - Entity with Joint Control IRB Kolhapur Integrated Road Development Company Private Limited (IRBK) Aryan Hospitality Private Limited (AHPL) IRB Sindhudurg Airport Private Limited (IRBSA) IRB Goa Tollway Private Limited (IRB Goa) IRB PS Highway Private Limited (IRBPS) IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV) MRM Mining Private Limited (Subsidiary of MRMPL) GE1 Expressway Private Limited (Formerly known as IRB PP Project Private Limited) VK1 Expressway Private Limited (VK1) - Upto October 12, 2022 IRB Infrastructure Trust - Entity with Joint Control VM7 Expressway Private Limited Palsit Dankuni Tollway Private Limited - Upto April 1, 2022 Pathankot Mandi Highway Private Limited Chittoor Thachur Highway Private Limited Meerut Budaun Expressway Limited - Subsidiary upto October 14, 2022 and Entity with Joint Control w.e.f. October 15,2022 Samakhiyali Tollway Private Limited w.e.f 14.03.2023 **C) Other Associate Companies of Sponsor / Project Manager** 1. Virendra D. Mhaiskar (HUF) 2. VCR Toll Services Private Limited 3. VDM Ventures Private Limited 4. DEUX Farming Films Private Limited 5. IRB Charitable Foundation **Key Managerial personnel of Project SPV Group** (Only with whom Project SPV Group had transactions during the year/ there was balance outstanding at the year end) 1. Ms. Shilpa Todankar 2. Mr. Abhay Phatak (w.e.f. March 09, 2022) 3. Mr. Darshan Sangurdekar 4. Mr. Omprakash Singh 5. Mr. Chandrashekhar Kaptan 6. Mrs. Ranjana Paranjape (w.e.f October 06, 2021) 7. Mrs. Arati Taskar 8. Mr. Sudhir Rao Hoshing 9. Mr. Amitabh Murarka 10. Mr. Jitendra Sharma (upto February 28, 2022) 11. Mrs. Heena Raja (upto October 01, 2021)

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2023

II) Related party transaction during the year

(Rs. in Millions)

Sr. No.	Particulars	Relation	Year ended March 31, 2023	Year ended March 31, 2022
1	**Equity Investment**		**1,212.00**	**615.00**
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	615.00
	Palshit Dankuni Tollway Private Limited	Subsidiary	1,212.00	-
2	**Subordinated Debt**		**2,282.64**	**2,264.49**
	CG Tollway Limited	Subsidiary	-	240.30
	IRB Hapur Muradabad Tollway Limited	Subsidiary	383.76	1,765.00
	IRB Westcoast Tollway Limited	Subsidiary	-	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	685.88	-
	Udaipur Tollway Limited	Subsidiary	-	259.19
	Palshit Dankuni Tollway Private Limited	Subsidiary	1,213.00	-
3	**Long term loan (Interest free)**		**48.71**	**48.71**
	Kaithal Tollway Limited	Subsidiary	48.71	48.71
4	**Short Term Loan given**		**2,643.20**	**1,682.67**
	AE Tollway Limited	Subsidiary	-	231.30
	IRB Hapur Muradabad Tollway Limited	Subsidiary	46.50	33.76
	IRB Westcoast Tollway Limited	Subsidiary	1,231.10	158.00
	Kaithal Tollway Limited	Subsidiary	-	502.40
	Solapur Yedeshi Tollway Limited	Subsidiary	-	4.00
	Udaipur Tollway Limited	Subsidiary	1,120.90	214.41
	CG Tollway Limited	Subsidiary	242.20	314.30
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	76.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	2.50	148.50
5	**Short Term Loan repaid**		**525.10**	**-**
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	-
	Kaithal Tollway Limited	Subsidiary	525.10	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	-
6	**Unit Capital Issued**		**1,236.75**	**1,946.33**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1,236.75	1,946.33
7	**Interest income**		**4,221.77**	**4,200.00**
	Solapur Yedeshi Tollway Limited	Subsidiary	560.00	560.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	581.77	560.00
	Kaithal Tollway Limited	Subsidiary	1,186.02	1,186.02
	IRB Westcoast Tollway Limited	Subsidiary	560.00	560.00
	AE Tollway Limited	Subsidiary	1,333.98	1,333.98

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2023

II) Related party transaction during the year

8	**Inestment Management Fees**		**56.52**	**42.48**
	MMK Toll Road Pvt Limited	Investment Manager	56.52	42.48
9	**Expenses incurred on behalf of others**		**358.05**	**0.89**
	AE Tollway Limited	Subsidiary	1.11	-
	CG Tollway Limited	Subsidiary	48.45	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	194.00	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	32.63	-
	IRB Westcoast Tollway Limited	Subsidiary	7.61	-
	Udaipur Tollway Limited	Subsidiary	16.08	0.89
	Solapur Yedeshi Tollway Limited	Subsidiary	3.78	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	8.69	-
	Kaithal Tollway Limited	Subsidiary	0.01	-
	Palsit Dankuni Tollway Private Limited	Subsidiary	45.60	-
	MMK Toll Road Pvt Limited	Investment Manager	0.08	-
10	**Reimbursement received on expenses incurred on behalf of others**	**-**	**128.32**	**-**
	AE Tollway Limited	Subsidiary	1.10	
	CG Tollway Limited	Subsidiary	1.10	
	Kishangarh Gulabpura Tollway Limited	Subsidiary	22.68	
	IRB Hapur Muradabad Tollway Limited	Subsidiary	9.73	
	IRB Westcoast Tollway Limited	Subsidiary	7.77	
	Udaipur Tollway Limited	Subsidiary	2.95	
	Solapur Yedeshi Tollway Limited	Subsidiary	27.89	
	Yedeshi Aurangabad Tollway Limited	Subsidiary	11.02	
	Kaithal Tollway Limited	Subsidiary	0.01	
	Palsit Dankuni Tollway Private Limited	Subsidiary	44.06	
11	**Unsecured Loan received**		**1,532.48**	**4,759.00**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1,532.48	4,759.00
12	**Unsecured Loan paid**		**267.50**	**4,828.83**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	267.50	4,828.83
13	**Expenses incurred on our behalf of (reimbursement)**		**-**	**1.77**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	-	1.77
14	**Other Payable**		**609.23**	**2,210.02**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	560.52	2,161.31
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project Manager	48.71	48.71
15	**Trustee Fees**		**2.53**	**0.38**
	IDBI Trusteeship Services Limited	Trustee	2.53	0.38

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2023

III) Related party outstanding balances

(Rs. in Millions)

Sr. No.	Particulars	Relation	As on March 31,2023	As on March 31,2022
1	**Equity Investment**		**22,212.01**	**21,000.01**
	AE Tollway Limited	Subsidiary	4,365.00	4,365.00
	CG Tollway Limited	Subsidiary	2,035.00	2,035.00
	IRB Hapur Muradabad Tollway Limited	Subsidiary	3,715.00	3,715.00
	IRB Westcoast Tollway Limited	Subsidiary	1,741.94	1,741.94
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,555.00	1,555.00
	Kaithal Tollway Limited	Subsidiary	3,280.00	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	982.50	982.50
	Udaipur Tollway Limited	Subsidiary	1,168.00	1,168.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	2,157.57	2,157.57
	Palshit Dankuni Tollway Private Limited	Subsidiary	1,212.00	-
2	**Subordinated Debt**		**72,212.43**	**69,929.79**
	AE Tollway Limited	Subsidiary	10,265.88	10,265.88
	CG Tollway Limited	Subsidiary	2,727.80	2,727.80
	IRB Hapur Muradabad Tollway Limited	Subsidiary	9,798.52	9,414.76
	IRB Westcoast Tollway Limited	Subsidiary	12,203.92	12,203.92
	Kishangarh Gulabpura Tollway Limited	Subsidiary	2,495.38	1,809.50
	Kaithal Tollway Limited	Subsidiary	4,426.04	4,426.04
	Solapur Yedeshi Tollway Limited	Subsidiary	4,423.70	4,423.70
	Udaipur Tollway Limited	Subsidiary	8,338.40	8,338.40
	Yedeshi Aurangabad Tollway Limited	Subsidiary	16,319.79	16,319.79
	Palshit Dankuni Tollway Private Limited	Subsidiary	1,213.00	-
3	**Long term loan (Interest bearing)**		**30,000.00**	**30,000.00**
	AE Tollway Limited	Subsidiary	9,528.41	9,528.41
	IRB Westcoast Tollway Limited	Subsidiary	4,000.00	4,000.00
	Kaithal Tollway Limited	Subsidiary	8,471.59	8,471.59
	Solapur Yedeshi Tollway Limited	Subsidiary	4,000.00	4,000.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	4,000.00	4,000.00
4	**Long term loan (Interest free)**		**351.69**	**302.98**
	Kaithal Tollway Limited	Subsidiary	351.69	302.98
5	**Short Term Loan**		**5,421.29**	**3,492.95**
	AE Tollway Limited	Subsidiary	478.89	478.89
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	37.26
	IRB Westcoast Tollway Limited	Subsidiary	2,348.08	1,116.98
	Kaithal Tollway Limited	Subsidiary	156.71	681.81
	Solapur Yedeshi Tollway Limited	Subsidiary	24.00	24.00
	Udaipur Tollway Limited	Subsidiary	1,335.31	214.41
	Yedeshi Aurangabad Tollway Limited	Subsidiary	519.80	517.30
	CG Tollway Limited	Subsidiary	558.50	316.30
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	106.00
6	**Other Payable**		**35,776.26**	**35,167.02**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	32,095.57	31,535.05
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project	351.69	302.98
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project	1,784.13	1,784.13
	IRB Goa Tollway private Limited	Subsidiaries Company of Sponsor and Project Manager	1,544.86	1,544.86
7	**Other payable (Reimbursement of Expenses incurred on our behalf)**		-	-
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1.77	1.77

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2023

8	**Other Receivable**		**284.05**	**-**
	Solapur Yedeshi Tollway Limited	Subsidiary	4.89	29.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	8.17	10.50
	IRB Westcoast Tollway Limited	Subsidiary	13.76	13.92
	Udaipur Tollway Limited	Subsidiary	14.11	0.99
	AE Tollway Limited	Subsidiary	0.01	-
	CG Tollway Limited	Subsidiary	47.35	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	171.32	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	22.90	-
	Kaithal Tollway Limited	Subsidiary	0.00	-
	Palshit Dankuni Tollway Private Limited	Subsidiary	1.54	-
	MMK Toll Road Private Limited	Investment Manager	0.08	
9	**Interest Receivable**		**7,681.04**	**5,556.27**
	Solapur Yedeshi Tollway Limited	Subsidiary	539.90	547.40
	Yedeshi Aurangabad Tollway Limited	Subsidiary	485.27	636.00
	Kaithal Tollway Limited	Subsidiary	2,112.74	1,693.72
	IRB Westcoast Tollway Limited	Subsidiary	1,552.00	992.00
	AE Tollway Limited	Subsidiary	2,991.13	1,687.16
10	**Trade payable**		**78.54**	**80.31**
	MMK Toll Road Pvt Limited	Investment Manager	78.54	80.31
11	**Unsecured Loan / other payable**		**4,872.91**	**3,607.93**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	4,872.91	3,607.93

Note 24 : Fair Values

Financial assets and liabilities

The carrying values of financials instruments of the trust are reasonable and approximations of fair values.

The accounting classification of each category of financial instruments, their carrying amounts and the categories of financial assets and liabilities measured at fair value, are set out below:

(Rs. in Millions)

	Carrying amount	Fair Value	Carrying amount	Fair Value
	As at March 31, 2023	As at March 31, 2023	As at March 31, 2022	As at March 31, 2022
Financial assets				
Financial assets measured at amortised cost				
Loans	35,772.98	35,772.98	33,795.94	33,795.94
Other financial assets	7,965.17	7,965.17	5,610.67	5,610.67
Financial assets measured at fair value through statement of Profit & Loss				
Investments in mutual trusts	20.08	20.08	20.04	20.04
Financial assets measured at amortised cost				
Cash and cash equivalents	6.56	6.56	0.25	0.25
Other Bank balances	-	-	-	-
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	81.35	81.35	81.71	81.71
Borrowings	4,872.91	4,872.91	3,607.93	3,607.93
Other financial liabilities	35,778.03	35,778.03	35,168.79	35,168.79

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.
The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the trust has determined that market participants would take into account when pricing the investments.

The trust is required to present the Statement of total assets at fair value and Statement of total returns at fair value as per SEBI Circular No. CIR/IMD/DF/114/2016 dated October 20, 2016 as a part of these financial statements - Refer Statement of Net assets at fair value and Statement of Total Returns at fair value.

Note 25 : Fair Value Hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price is active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly.

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

There were no transfers between Level 1, Level 2 and Level 3 during the year.

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2023:

(Rs. in Millions)

	As at March 31, 2023	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Loans	35,772.98	-	-	35,772.98
Cash and cash equivalents	6.56			6.56
Other Financial assets	7,965.17	-	-	7,965.17
Investments in mutual fund (Quoted)	20.08	20.08	-	-
Liabilities				
Trade payable	81.35	-	-	81.35
Other financial liabilities	35,778.03	-	-	35,778.03
Borrowings	4,872.91			4,872.91

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2022:

(Rs. in Millions)

	As at March 31, 2022	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Loans	33,795.94	-	-	33,795.94
Other Financial assets	5,610.67	-	-	5,610.67
Investments in mutual fund (Quoted)	20.04	20.04	-	-
Liabilities				
Trade payable	81.71	-	-	81.71
Other financial liabilities	35,168.79	-	-	35,168.79

Note 26 : Financial risk management objectives and policies

The trust's risk management policies are established to identify and analyse the risks faced by the trust, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the trust's activities.

The Board of Directors of Investment Manager have overall responsibility for the establishment and oversight of the trust's risk management framework.

In performing its operating, investing and financing activities, the trust is exposed to the Credit risk, Liquidity risk and Market risk.

a. Market Risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans borrowings and deposits.

Credit risk

Credit risk is the risk that a counter party will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The trust is exposed to credit risk from its investing activities including loans to subsidiaries, deposits with banks and other financial instruments. As at March 31, 2023, the credit risk is considered low since substantial transactions of the trust are with its subsidiaries.

Interest Rate Risk

Interest rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The trust's exposure to the risk of changes in market interest rates relates primarily to the trust's long-term debt obligations with floating interest rates.

c. Liquidity risk

Liquidity risk is the risk that the trust may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The trust's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements.

The trust closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt and overdraft from banks at an optimised cost.

The liquidity risk is managed on the basis of expected maturity dates of the financial liabilities. The average credit period taken to settle trade payables is about 30 to 90 days. The other payables are with short-term durations. The carrying amounts are assumed to be a reasonable approximation of fair value. The following table analyses financial liabilities by remaining contractual maturities:

(Rs. in Millions)

March 31, 2023	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Borrowings	-		4,872.91		-	**4,872.91**
Other financial liabilities			-	35,778.03		**35,778.03**
Trade payables	-	0.01	50.56	30.78	-	**81.35**
Total	**-**	**0.01**	**4,923.47**	**35,808.80**	**-**	**40,732.29**

March 31, 2022	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Borrowings	-		3,607.93		-	**3,607.93**
Other financial liabilities			-	35,168.79		**35,168.79**
Trade payables	-	-	35.28	46.43	-	**81.71**
Total	**-**	**-**	**3,643.21**	**35,215.22**	**-**	**38,858.44**

At present, the trust does expects to repay all liabilities at their contractual maturity. In order to meet such cash commitments, the operating activity is expected to generate sufficient cash inflows.

Note 27 : Capital management

Capital includes equity attributable to the equity holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise shareholder value. The trust manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the trust may adjust the distribution of cash flow of return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the year ended March 31, 2023
The trust monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
Borrowings	4,872.91	3,607.93
Less: cash and cash equivalents	(6.56)	(0.25)
Net debt (A)	**4,866.35**	**3,607.69**
Unit capital	87,929.33	85,504.33
Other equity	9,526.42	5,992.74
Total equity (B)	**97,455.75**	**91,497.07**
Capital and net debt C = A + B	**1,02,322.10**	**95,104.76**
Gearing ratio (%) (C / A)	**4.76%**	**3.79%**

In order to achieve this overall objective, the trust's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current year.

Note 28 : Significant accounting judgement, estimates and assumptions

The preparation of the trust's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities and the actrusting disclosures and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in out comes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Judgement

In the process of applying the trust’s accounting policies, management has made the judgement, which have the most significant effect on the amounts recognised in the financial statements.

Classification of unit holders trusts

Under the provisions of the InvIT Regulations, trust is required to distribute to Unit holders not less than ninety percent of the net distributable cash flows of trust for each financial year. Accordingly, a portion of the unit holders’ trusts contains a contractual obligation of the trust to pay to its Unit holders cash distributions. The Unit holder's trusts could therefore have been classified as compound financial instrument which contain both equity and liability components in accordance with Ind AS 32-Financial Instruments: Presentation.
However, in accordance with SEBI Circulars(No.CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No.CIR/IMD/DF/127/2016 dated 29-Nov-2016) issued under the InvIT Regulations, the unit holders’ trusts have been classified as equity in order to comply with the mandatory requirements of Section H of Annexure A to the SEBI Circular dated 20-Oct-2016 dealing with the minimum disclosures for key financial statements. In line with the above, the income distribution payable to unit holders is recognized as liability when the same is approved by the Investment Manager.

Estimates and assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities or fair value disclosures within the next financial year, are described below. The trust based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the trust. Such charges are reflected in the assumptions when they occur.

Fair valuation and disclosures

SEBI Circulars issued under the InvIT Regulations required is diclosures relating to net assets at fair value and total returns at fair value. In estimating the fair value of investments in subsidiaries (which constitute substantial portion of the net assets), the Trust engages independent qualified external valuers to perform the valuation. The management works closely with the valuers to establish the appropriate valuation techniques and inputs to the model. The management reports the valuation report and findings to the Board of the Investment Manager half yearly to explain the cause of fluctuations in the fair value of the road projects. The inputs to the valuation models are taken from observable markets where possible, but where this is not feasible, a degree of judgement is required in establishing fair values. Judgements include considerations of inputs such as WACC, Tax rates, Inflation rates etc. Changes in assumptions about these factors could affect the fair value. (refer note 24 for details).

Impairment of non-financial assets

Non-financial assets of the trust primarily comprise of investments in subsidiaries, Impairment exists when the carrying value of an asset or cash generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The recordable amounts for the investments in subsidiaries are based on value in use of the underlying projects. The value in use calculation is based on a DCF model. The cash flows are derived from budgets / forecasts over the life of the projects.

Note 29 : Investment Manager Fees

Pursuant to the terms of the Investment Management Agreement, the fees will be paid to the Investment Manager for the services provided by it ("Management Fees"). The Management Fees have been revised for the Financial Year with the approval of the Unitholders, where the votes cast by Unitholders so entitled and voting in favor of a resolution are not less than one-and-a-half times the votes cast against such resolution. Pursuant to a resolution of the Unitholders, the Management Fees for the Financial Year 2023 has been revised to Rs.47.70 millions

Note 30 : Taxes

In accordance with section 10 (23FC) of the Income Tax Act, the income of business trust in the form of interest received or receivable from Project SPV is exempt from tax. Accordingly, the trust is not required to provide any current tax liability. Further, deferred tax assets on carry forward losses is not being created since there is no virtual certainty of reversal of the same in the near future.

Note 31

On April 7, 2022, the Trust has executed arrangement with the Sponsor for implementation of Palsit Dankuni Tollway Private Limited ('SPV') by the Trust and accordingly, the project is being executed by the SPV and the Trust.

Note 32 : Events after reporting period

There is no subsequent event after the reporting period which requires adjustments to the financial statements.

Note 33 : Previous period comparatives

Previous period's figures have been regrouped/reclassified, wherever necessary, to confirm to current period's classification.

Note 34 : Subsequent Events

The Trust has been listed on NSE w.e.f. 03.04.2023

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 12.05.2023

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 12.05.2023

INDEPENDENT AUDITOR'S REPORT

To the Unit Holders of IRB Infrastructure Trust

REPORT ON THE AUDIT OF THE STANDALONE IND AS FINANCIAL STATEMENTS

OPINION

We have audited the accompanying standalone financial statements of IRB Infrastructure Trust ("the InvIT" or "the Trust"), which comprise the Balance Sheet as at 31 March 2022, the Statement of Profit and Loss including Other Comprehensive Income, the Statement of Cash Flows and the Statement of Changes in Unit Holders' Equity and Statement of Total Returns at fair value for the year ended 31 March 2022 ("the financial period"), the Statement of Net Assets at fair value as at 31 March 2022, and Notes to the Standalone Financial Statements including a Summary of Significant Accounting Policies and Other Explanatory Information (hereinafter referred to as "the standalone financial statements").

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Standalone Financial Statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI InvIT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards prescribed under rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended ("Ind AS") and other accounting principles generally accepted in India, of the State of Affairs of the Trust as at 31 March 2022, its **Profit** including other Comprehensive Income, its Cash Flows, changes in Unit holders' Equity and the Total Returns at Fair Value for the year ended 31 March 2022 and the Net Assets at fair value as at 31 March 2022.

BASIS FOR OPINION

We conducted our audit of the Standalone Financial Statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Standalone Financial Statements section of this report. We are independent of the Trust in accordance with the code of ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Standalone Financial Statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the Standalone Financial Statements.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Standalone Financial Statements of the financial period. These matters were addressed in the context of our audit of the Standalone Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
1. Loss on fair value measurement of other payable / deferred consideration payable to IRB Group. Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims. Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head 'Loss on fair value measurement of other payable'.	• We reviewed the Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs. • We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made. • We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein. • We also reviewed the reasonableness of the variables applied in the said computation. • Based on the above, the fair value of liability to the Sponsor, as estimated by the valuer, taking into consideration the weighted average of probabilities of realization has been validated.
2. Impairment Testing The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment. The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights. Accordingly, the evaluation of impairment of toll collection rights has been determined as a Key Audit Matter.	• We evaluated management's assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management. • Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue. • Evaluated the potential changes in major components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were suitable. • Assessed the appropriateness of the weighted average cost of capital used in determining recoverable amount. • Performed sensitivity analysis of key assumptions used in valuation. • Tested the arithmetical accuracy of the model.

INFORMATION OTHER THAN THE STANDALONE FINANCIAL STATEMENTS AND AUDITOR'S REPORT THEREON

The Board of Directors of Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations, but does not include the standalone financial statements and our report thereon.

Our opinion on the standalone financial statements does not cover the other information and we do not express any form of assurance conclusion thereon. In connection with our audit of the standalone financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the standalone financial statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF THE BOARD OF DIRECTORS OF INVESTMENT MANAGER FOR THE STANDALONE FINANCIAL STATEMENTS

The Board of Directors of Investment Manager is responsible for the preparation of these Standalone Financial Statements that give a true and fair view of the financial position as at 31 March 2022, financial performance including other comprehensive income, cash flows, changes in unit holders' equity and total returns at fair value for the year ended 31 March 2022 and the net assets at fair value as at 31 March 2022 in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended and relevant rules issued thereunder read with the SEBI InvIT Regulations. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the SEBI InvIT Regulations for safeguarding of the assets of the Trust and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the Standalone Financial Statements that give a true and fair view and are free from material misstatement, whether due to fraud and error.

In preparing the Standalone Financial Statements, the Board of Directors of Investment Manager is responsible for assessing the Trust's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager either intends to liquidate the Trust or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of Investment Manager are also responsible for overseeing the Trust's financial reporting process.

AUDITOR'S RESPONSIBILITY FOR THE AUDIT OF THE STANDALONE IND AS FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance whether the Standalone Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the standalone financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.

- Obtain an understanding of internal financial control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of such controls.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Board of Directors of Investment Manager.

- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Trust's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Trust to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Materiality is the magnitude of misstatements in the standalone financial statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Standalone Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Based on our audit and as required by SEBI InvIT Regulations, we report that:

a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit;

b. The Balance Sheet, the Statement of Profit and Loss, the Statement of Cash Flows, Statement of Changes in Unit Holder's Equity, the Statement of Net Assets at fair value and the Statement of Total Returns at fair value dealt with by this Report are in agreement with the books of account of the Trust; and

c. In our opinion, the aforesaid financial statements comply with the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For Gokhale & Sathe,
Chartered Accountants
Firm Registration No.: 103264W

SD /-
CA Kaustubh Deshpande,
Partner
Membership No. 121011
UDIN:22121011AJFJMR7003
Date: 06th May 2022
Place: Mumbai

IRB Infrastructure Trust
Balance Sheet as at March 31, 2022

(Rs. in Millions)

		Note No.	As at March 31, 2022	As at March 31, 2021
I	**ASSETS**			
(1)	**Non-current assets**			
	Financial assets	4		
	i) Investments	4.1	90,929.80	88,050.31
	ii) Loans	4.2	30,302.98	30,254.28
	Total non-current assets		**1,21,232.78**	**1,18,304.59**
(2)	**Current assets**			
	Financial assets	5		
	i) Investments	5.1	20.04	50.00
	ii) Cash and cash equivalents	5.2	0.25	12.65
	iii) Loans	5.3	3,492.95	1,810.28
	iv) Other financial assets	5.4	5,610.67	2,234.78
	Other current assets	6	-	0.03
	Total current assets		**9,123.92**	**4,107.74**
	TOTAL ASSETS		**1,30,356.70**	**1,22,412.32**
II	**EQUITY AND LIABILITIES**			
	Equity			
	Unit capital	7	85,504.33	81,688.00
	Other equity	8	5,992.74	4,020.25
	Total unit holder's equity		**91,497.07**	**85,708.25**
(1)	**Non-current liabilities**			
	Financial liabilities	9		
	i) Other financial liabilities	9	35,168.79	24,717.75
	Total non- current liabilities		**35,168.79**	**24,717.75**
(2)	**Current liabilities**			
	Financial liabilities	10		
	i) Borrowings	10.1	3,607.93	3,677.76
	ii) Trade payables	10.2		
	a) total outstanding dues of creditors other than micro enterprises and small enterprises		81.71	67.61
	iii Other financial liabilities	10.3	-	8,239.25
	Other Current liabilities	11	1.20	1.70
	Total current liabilities		**3,690.84**	**11,986.32**
	Total liabilities		**38,859.63**	**36,704.08**
	TOTAL EQUITY AND LIABILITIES		**1,30,356.70**	**1,22,412.32**
	Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-

CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 06/05/2022

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place : Mumbai
Date : 06/05/2022

IRB Infrastructure Trust

Statement of Profit and Loss for the year ended March 31, 2022

(Rs. in Millions)

	Note No.	For the year ended March 31, 2022	For the year ended March 31, 2021
Income			
Other income	12	4,200.44	4,203.30
TOTAL INCOME		**4,200.44**	**4,203.30**
Expenses			
Investment Manager Fees		42.48	46.25
Other expenses	13	2,182.21	5.83
TOTAL EXPENSES		**2,224.69**	**52.08**
Profit / (Loss) before tax		**1,975.75**	**4,151.21**
Tax expenses			
Current tax		-	-
Profit / (Loss) after tax (A)		**1,975.75**	**4,151.21**
Other comprehensive income / (loss) for the year (net of tax)			
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)		-	-
Other comprehensive income/(loss) for the year (net of tax) (B)		-	-
Total comprehensive income for the year, net of tax : (A+B)		**1,975.75**	**4,151.21**
Earnings per unit			
Basic		**2.34**	**5.29**
Diluted		**2.34**	**5.29**
Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
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SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 06/05/2022

Place: Mumbai
Date : 06/05/2022

IRB Infrastructure Trust
Statement of changes in Equity for the year ended March 31, 2022

		As at March 31, 2022	As at March 31, 2021
			(Rs. in Millions)
a.	**Unit Capital**		
	At the beginning of the year	81,688.00	76,582.50
	Issued during the year	3,816.33	5,105.50
	At the end of the year	**85,504.33**	**81,688.00**
b.	**Other Equity**		
	Retained earnings		
	At the beginning of the year	4,020.25	(27.16)
	Profit for the period	1,975.75	4,151.21
	Unit issue expenses	(3.26)	(103.81)
	At the end of the year	**5,992.74**	**4,020.25**

Summary of Significant accounting policies (refer note no.3)

See accompanying notes to the financial statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 06/05/2022

Place : Mumbai
Date : 06/05/2022

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2022

(Rs. in Millions)

Particulars	For the year ended March 31, 2022	For year ended March 31, 2021
Cash flow from operating activities		
Profit / (Loss) before tax	1,975.75	4,151.21
Adjustments to reconcile profit before tax to net cash flows:		
Profit on sale of investments	(0.40)	(0.43)
Interest income on		
- Others	(4,200.00)	(4,200.00)
Operating profit/(loss) before working capital changes	**(2,224.69)**	**(49.22)**
Movement in working capital:		
Increase/(decrease) in trade payables	14.10	40.48
Increase/(decrease) in other financial liabilities	2,211.79	(2,616.69)
Increase/(decrease) in other current liabilities	(0.50)	1.68
(Increase)/decrease in Other current assets	0.03	(0.03)
(Increase)/decrease in loans	(1,682.67)	28,019.39
(Increase)/decrease in Other Financial assets	(3,375.89)	(2,234.78)
Cash generated from/(used in) operations	**(5,057.84)**	**23,160.83**
Direct taxes paid (net of refunds)	-	-
Net cash flows from/(used in) operating activities (A)	**(5,057.84)**	**23,160.83**
Cash flows from investing activities		
Investment in subsidiaries	(615.00)	(1,205.00)
Investment in sub debt of subsidiaries	(2,264.49)	(34,724.37)
Loan given to subsidiaries Long term	(48.71)	(48.71)
Interest received from others	4,200.00	4,200.00
Gain on sale of Investment	0.44	0.43
Purchase of Investment	-	(50.00)
Sale of Investment	29.95	-
Net cash flows from/(used in) investing activities (B)	**1,302.20**	**(31,827.64)**
Cash flow from financing activities		
Other Equity		
Proceeds from issuance of unit capital	3,816.33	5,105.50
Proceeds / Repayment of curent borrowings	(69.83)	3,677.76
Unit Issue Expenses	(3.26)	(103.81)
Net cash flows from/(used in) financing activities (C)	**3,743.24**	**8,679.45**
Net increase/(decrease) in cash and cash equivalents (A+B+C)	**(12.40)**	**12.64**
Cash and cash equivalents at the beginning of the period	12.65	0.01
Cash and cash equivalents at the end of the period (refer 5.2)	**0.25**	**12.65**
Components of cash and cash equivalents		
Cash on hand	-	-
Balances with scheduled banks		
- On Current Account	0.25	12.65
Total Cash and cash equivalents (refer note 5.2)	**0.25**	**12.65**

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2022

Notes:

1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. Reconciliation between opening and closing balances for liabilities arising from financing activities
4. The cash flow statement has been prepared under Indirect Method as per Ind AS 7 “Statement of Cash Flows” as notified under section 133 of the Companies Act, 2013.

As per our report of even date

For Gokhale & Sathe	**For and on behalf of MMK Toll Road Private Limited**	
Chartered Accountants	(Investment Manager of IRB Infrastructure Trust)	
ICAI Firm Registration Number: 103264W		
SD/-	**SD/-**	**SD/-**
CA. Kaustubh Deshpande	**Virendra D. Mhaiskar**	**Dhananjay K. Joshi**
Partner	Chairman	Chief Executive officer
Membership No.: 121011	DIN : 00183554	
	SD/-	**SD/-**
	Shilpa Todankar	**Kaustubh Shevade**
	Chief Financial officer	Company secretary
		Membership No. A27833
Place: Mumbai	Place : Mumbai	
Date : 06/05/2022	Date : 06/05/2022	

IRB Infrastructure Trust

DISCLOSURES PURSUANT TO SEBI CIRCULARS

(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Statement of Net Asset at Fair Value

-

	As at March 31, 2022		As at March 31, 2021	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	1,30,356.70	1,36,296.70	1,22,412.32	1,48,712.32
B. Liabilities (at book value)	38,859.63	38,859.63	36,704.08	36,704.08
C. Net Assets (A-B)	91,497.07	97,437.07	85,708.25	1,12,008.25
D. Number of units (in millions)	855.04	855.04	816.88	816.88
E. NAV (C/D) (Amount in Rs.)	**107.01**	**113.96**	**104.92**	**137.12**

B. Statement of total returns at Fair Value

-

Particulars	**For the year ended March 31, 2022**	**For the year ended March 31, 2021**
Total Comprehensive Income (As per the Statement of Profit and Loss)	1,975.75	4,151.21
Add/(less): Other Changes in Fair Value	5,940.00	26,300.00
Comprehensive Income -	**7,915.75**	**30,451.21**

Notes :

Fair value of assets as at March 31, 2020 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 06/05/2022

Place: Mumbai
Date : 06/05/2022

IRB Infrastructure Trust

Notes to financial statements for the year ended March 31, 2022

1. Trust Information and Nature of Operations

IRB Infrastructure Trust (the "Fund" / "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under Indian Trust Act, 1882 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Trust is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registration certificate from SEBI having registration number IN/InviT/19-20/0012

The Fund has been formed to invest in infrastructure assets primarily being in the road sector in India. The Fund's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Fund's portfolio comprises of nine road projects are listed below:-

The Fund had acquired the following projects from the Sponsor which are road infrastructure projects developed on DBFOT basis.

Sr. No.	Project SPV Name
1	AE Tollway Limited (AETL)
2	CG Tollway Limited (CGTL)
3	IRB Hapur Moradabad Tollway Limited (IRBHMTL)
4	IRB Westcoast Tollway Limited (IRBWTL)
5	Kishangarh Gulabpura Tollway Limited (KGTL)
6	Kaithal Tollway Limited (KTL)
7	Solapur Yedeshi Tollway Limited (SYTL)
8	Udaipur Tollway Limited (UTL)
9	Yedeshi Aurangabad Tollway Limited (YATL)

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.

The financial statements were authorised for issue in accordance with resolution passed by the board of directors of the Investment manager on May 06, 2022.

2. Basis of preparation

The financial statements of IRB Infrastructure Trust have been prepared in accordance with Indian Accounting Standards as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended, prescribed under Section 133 of the Companies Act, 2013 ("Ind AS") read with SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended and the circulars issued thereunder ("InvIT Regulations") and other accounting principles generally accepted in India.

The financial statements have been prepared on an accrual basis and under the historical cost convention except for certain financial assets and liabilities (refer accounting policy regarding financial instruments) which have been measured at fair value.

The financial statements are presented in Indian Rupee ('INR') which is the functional currency of the Fund and all values are rounded to the nearest lakhs, except when otherwise indicated. Wherever the amount represented '0' (zero) construes value less than Rupees five hundred

3. Summary of significant accounting policies

3.1. Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the results of operations during the reporting period end. Although these estimates are based upon management’s best knowledge of current events and actions, actual results could differ from these estimates.

3.2. Current versus non-current classification

The Fund presents assets and liabilities in the balance sheet based on current/ non-current classification.
An asset is treated as current when it is:
- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle

- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents. The Fund has identified twelve months as its operating cycle.

3.3. Revenue recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Fund and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the fair value of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duties collected on behalf of the government.

The specific recognition criteria described below must also be met before revenue is recognised:

Interest income
Revenue is recognised on a time proportion basis taking into account the amount outstanding and the rates applicable. For all debt instruments measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR).

Dividends
Revenue is recognised when the Fund's right to receive the payment is established, which is generally when shareholders approve the dividend.

3.4. Taxes

Current income tax
Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Fund operates and generates taxable income.

Current income tax relating to items recognised outside the Statement of Profit and Loss is recognised outside the Statement of Profit and Loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax
Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:
- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction affects neither the accounting profit nor taxable profit or loss

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity).

Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Sales/value added tax and goods and service tax paid on acquisition of assets or on incurring expenses

Expenses and assets are recognised net of the amount of sales/value added taxes and goods and service tax paid, except:

When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet.

3.5. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences to the extent regarded as an adjustment to the borrowing costs.

3.6. Provisions

Provisions are recognised when the Fund has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Fund expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the Statement of Profit and Loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

3.7. Contingent liabilities and contingent assets

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Fund or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Fund does not recognise a contingent liability but discloses its existence in the financial statements.
A contingent asset is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.
Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.8. Financial instrument

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement
All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through Statement of Profit and Loss, directly attributable transaction cost to the acquisition of the financial asset. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognised on the trade date, i.e., the date that the Fund commits to purchase or sell the asset.

Subsequent measurement
For purposes of subsequent measurement, financial assets are classified in following categories;
- at amortised cost
- at fair value through profit or loss (FVTPL)
- at fair value through other comprehensive income (FVTOCI)

Financial Assets at amortised cost
A financial asset is measured at the amortised cost if both the following conditions are met:
a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

This category is the most relevant to the Fund. All the Loans and other receivables under financial assets (except Investments) are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

After initial measurement such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The losses arising from impairment are recognised in the Statement of Profit and Loss.

Financial Assets at Fair Value through Statement of Profit and Loss/Other comprehensive income

All investments in scope of Ind AS 109 are measured at fair value. The Fund has investment in Debt oriented mutual fund which are held for trading, are classified as at FVTPL. The Fund makes such election on an instrument by instrument basis. The

classification is made on initial recognition and is irrevocable. The gain/ loss on sale of investments are recognised in the Statement of Profit and Loss.
Instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of Profit and Loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a the Fund of similar financial assets) is primarily derecognised (i.e. removed from the Fund's balance sheet) when:
The rights to receive cash flows from the asset have expired, or
The Fund has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Fund has transferred substantially all the risks and rewards of the asset, or (b) the Fund has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Fund has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Fund continues to recognise the transferred asset to the extent of the Fund's continuing involvement. In that case, the Fund also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Fund has retained.

3.9. Impairment of assets

Impairment of financial assets

Expected credit losses are recognized for all financial assets subsequent to initial recognition other than financial assets in FVTPL category.

For financial assets other than trade receivables, as per Ind AS 109, the Fund recognizes 12 month expected credit losses for all originated or acquired financial assets if at the reporting date the credit risk of the financial asset has not increased significantly since its initial recognition. The expected credit losses are measured as lifetime expected credit losses if the credit risk on financial assets increases significantly since its initial recognition.

The impairment losses and reversals are recognized in Statement of Profit and Loss.

Impairment of non-financial assets

The Fund assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Fund estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset unless the asset does not generate cash inflows that are largely independent of those from other assets or Fund's assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Fund’s financial liabilities include trade and other payables, loans and borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Fund that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the statement of profit and loss.

Loans and borrowings

This is the category most relevant to the Fund. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are de-recognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

De-recognition

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the statement of profit and loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.10 Investment in subsidiaries

Investments (equity instruments as well as subordinate debt) in subsidiaries are carried at cost less accumulated impairment losses, if any. Where an indication of impairment exists, the carrying amount of the investment is assessed and written down immediately to its recoverable amount. On disposal of investments in subsidiaries, the difference between net disposal proceeds and carrying amounts are recognised in the Statement of Profit and Loss.

3.11Foreign currencies

The Fund’s financial statements are presented in INR, which is also the Fund’s functional currency. The Fund does not have any foreign operation and has assessed the functional currency to be INR.

Transactions and balances

Transactions in foreign currencies are initially recorded by the Fund at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

3.12 Fair value measurement

The Fund measures financial instruments, such as, derivatives at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

► In the principal market for the asset or liability, or

► In the absence of a principal market, in the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible by the Fund.
The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.
A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.
The Fund uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.
All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:
► Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities
► Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
► Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable
For assets and liabilities that are recognised in the financial statements on a recurring basis, the Fund determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.
The Fund's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.
At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Fund's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.
The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.
On an annual basis, the Management of Investment Manager presents the valuation results to the Audit Committee and the Fund's independent auditors. This includes a discussion of the major assumptions used in the valuations.
For the purpose of fair value disclosures, the Fund has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.
This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.
- Disclosures for valuation methods, significant estimates and assumptions (note 28)
- Financial instruments (including those carried at amortised cost) (note 24 and 25)
- Quantitative disclosure of fair value measurement hierarchy (note 24 and 25)

3.13 Contributed Equity

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

3.14 Distribution to unit holders

The Fund recognises a liability to make cash distributions to unit holders when the distribution is authorised and a legal obligation has been created. As per the InvIT Regulations, a distribution is authorised when it is approved by the Board of Directors of the Investment Manager. A corresponding amount is recognised directly in equity.

3.15 Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.
For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, net of outstanding bank overdrafts as they are considered an integral part of the Fund’s cash management.

3.16 Earnings Per Unit (EPU)

Basic earnings per unit are calculated by dividing the net profit for the year attributable to unit holders by the weighted average number of units outstanding during the year.

For the purpose of calculating diluted earnings per unit, the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

3.17 Investment

Investments, which are readily realisable and intended to be held for not more than one year from the date on which such investments are made, are classified as current investments. All other investments are classified as long-term investments.

On initial recognition, all investments are measured at cost. The cost comprises purchase price and directly attributable acquisition charges such as brokerage, fees and duties. If an investment is acquired, or partly acquired, by the issue of shares or other securities, the acquisition cost is the fair value of the securities issued.

Current investments are carried in the financial statements at lower of cost and fair value determined on an individual investment basis. Long-term investments are carried at cost. However, provision for diminution in value is made to recognise a decline other than temporary in the value of the investments.

On disposal of an investment, the difference between its carrying amount and net disposal proceeds is charged or credited to the Statement of profit and loss.

3.18 Segment Information

The Fund is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Fund's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

(Rs. in Millions)

	As at March 31, 2022	As at March 31, 2021
Note 4 : Financial assets (Non-current)		
4.1 Investments		
A) Investments at cost		
Investments in equity instruments of subsidiaries (unquoted)		
436,500,000 equity shares of AE Tollway Limited	4,365.00	4,365.00
203,500,000 equity shares of CG Tollway Limited	2,035.00	2,035.00
310,000,000 equity shares of IRB Hapur Moradabad Tollway Limited	3,715.00	3,100.00
174,194,303 equity shares of IRB Westcoast Tollway Limited	1,741.94	1,741.94
155,500,000 equity shares of Kishangarh Gulabpura Tollway Limited	1,555.00	1,555.00
328,000,000 equity shares of Kaithal Tollway Limited	3,280.00	3,280.00
98,250,000 equity shares of Solapur Yedeshi Tollway Limited	982.50	982.50
116,800,000 equity shares of Udaipur Tollway Limited	1,168.00	1,168.00
215,757,001 equity shares of Yedeshi Aurangabad Tollway Limited	2,157.57	2,157.57
Investments in subsidiaries (unquoted)	**21,000.01**	**20,385.01**
Other equity instruments (unquoted) (FVTOCI)		
B) Investments at cost		
Investments in sub debt of subsidiaries (unquoted)		
AE Tollway Limited	10,265.88	10,265.88
CG Tollway Limited	2,727.80	2,487.50
IRB Hapur Moradabad Tollway Limited	9,414.76	7,649.76
IRB Westcoast Tollway Limited	12,203.92	12,203.92
Kishangarh Gulabpura Tollway Limited	1,809.50	1,809.50
Kaithal Tollway Private Limited	4,426.04	4,426.04
Solapur Yedeshi Tollway Limited	4,423.70	4,423.70
Udaipur Tollway Limited	8,338.40	8,079.21
Yedeshi Aurangabad Tollway Limited	16,319.79	16,319.79
Subordinated debt to related parties (interest free)	**69,929.79**	**67,665.30**
Total non-current investments (A + B)	**90,929.80**	**88,050.31**
Aggregate amount of unquoted investments	**90,929.80**	**88,050.31**

4.2 Loans

(Unsecured, considered good, unless otherwise stated)		
- Interest bearing	-	-
AE Tollway Limited	9,528.41	9,528.41
IRB Westcoast Tollway Limited	4,000.00	4,000.00
Kaithal Tollway Limited	8,774.57	8,725.87
Solapur Yedeshi Tollway Limited	4,000.00	4,000.00
Yedeshi Aurangabad Tollway Limited	4,000.00	4,000.00
Less: Current maturities of loan to related parties	-	-
- Interest bearing	-	-
- Interest free	-	-
Total	**30,302.98**	**30,254.28**

(Rs. in Millions)

	As at March 31, 2022	As at March 31, 2021
Note 5 : Financial assets (current)		
5.1 Investments		
Investments at fair value through Profit & Loss		
Investments in mutual fund (quoted)		
Investments in Mutual Funds (quoted) (FVTPL)	20.04	50.00
(SBI Liquid Fund Direct Growth - March 31,2022 - 3333.09 units)		
	20.04	**50.00**
5.2 Cash and cash equivalent		
Balances with banks:		
- In current accounts	0.25	12.65
	0.25	**12.65**

For the purpose of the statement of cash flows, cash and cash equivalents comprise the following:

Balances with banks:		
-On current accounts	0.25	12.65
Total	**0.25**	**12.65**

5.3 Loans		
(Secured, considered good, unless otherwise stated)		
(Unsecured, considered good, unless otherwise stated)		
Loans to related parties		
AE Tollway Limited	478.89	247.59
IRB Hapur Moradabad Tollway Limited	37.26	3.50
IRB Westcoast Tollway Limited	1,116.98	958.98
Kaithal Tollway Limited	681.81	179.41
Solapur Yedeshi Tollway Limited	24.00	20.00
Udaipur Tollway Limited	214.41	-
CG Tollway Limited	316.30	2.00
Kishangarh Gulabpura Tollway Limited	106.00	30.00
Yedeshi Aurangabad Tollway Limited	517.30	368.80
	3,492.95	**1,810.28**
5.4 Other financial assets		
(Unsecured, considered good, unless otherwise stated)		
Interest receivable from related parties	5,556.27	2,181.27
Other receivable		
- related parties	54.40	53.51
	5,610.67	**2,234.78**
Note 6 : Other current assets		
Advance given to suppliers		
- others	-	0.03
Total	**-**	**0.03**

IRB Infrastructure Trust

Notes to financial statement for year ended March 31, 2022

Note 7 : Equity

(Rs. in Millions)

	As at March 31 ,2022	As at March 31,2021
I. Unit capital		
a. Issued, subscribed and fully paid up Unit Capital		
Unit capital of Rs. 100 each issued, subscribed and fully paid up		
At the beginning the year	81,688.00	76,582.50
Issued during the year	3,816.33	5,105.50
At the end of the year	**85,504.33**	**81,688.00**

II. Reconciliation of the number of units outstanding and the amount of unit capital:

	As at March 31 ,2022		As at March 31,2021	
	No. of units	Amount in Millions	No. of units	Amount in Millions
At the beginning of the year	81,68,80,000	81,688.00	76,58,25,000	76,582.50
Issued during the year	3,81,63,265	3,816.33	5,10,55,000	5,105.50
At the end of the year	**85,50,43,265**	**85,504.33**	**81,68,80,000**	**81,688.00**

III. Details of Promoter

	As at March 31 ,2022		As at March 31,2021	
	No. of units	Amount Rs. in lakhs	No. of units in lakhs	Amount Rs. in lakhs
IRB Infrastructure Developers Limited	43,60,72,332	51%	41,66,09,067	51%
Anahera Investments Pte Ltd	21,37,60,685	25%	20,42,19,865	25%
Bricklayers Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Chiswick Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Stretford End Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Dangenham Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Total	**85,50,43,265**	100%	**81,68,80,000**	100%

Note :8 Other Equity

	As at March 31 ,2022	As at March 31,2021
Retained earnings		
At the beginning of the year	4,020.25	(27.16)
Profit/(loss) for the year	1,975.75	4,151.21
Unit issue expenses	(3.26)	(103.81)
Total Other Equity	**5,992.74**	**4,020.25**

(Rs. in Millions)

	As at March 31, 2022	As at March 31, 2021
9 Other financial liabilities		
Other Payable		
- related party	35,168.79	24,717.75
	35,168.79	**24,717.75**
Note 10 : Current financial liabilities		
10.1 Borrowing		
Unsecured loan		
Loan from related parties		
- Interest free	3,607.93	3,677.76
Total	**3,607.93**	**3,677.76**
10.2 Trade Payables		
b) Total outstanding dues of creditors other than micro and small enterprises		
- related parties	80.31	67.43
- others	1.40	0.19
Total	**81.71**	**67.61**
10.3 Other financial liabilities		
Other payables		
- related parties	-	8,239.25
	-	**8,239.25**
Note 11 : Other current liabilities		
Statutory dues payable (including PF, TDS, GST & others)	1.20	1.70
Total	**1.20**	**1.70**

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022

(Rs. in Millions)

	For the year ended March 31, 2022	For the year ended March 31, 2021
Note 12 : Other income		
Interest income on		
Interest income on bank deposits	-	-
Interest income from others	4,200.00	4,200.00
Gain on sale of investment	0.40	0.43
Gain/(loss) on fair value measurement of other payable	-	2.86
Fair value gain on investments	0.04	-
	4,200.44	**4,203.30**
Note 13 : Other expenses		
Rates & taxes	4.73	0.28
Legal and professional fees	15.49	4.96
Payment to auditor (refer note below)	0.64	0.56
Bank charges	0.03	0.02
Miscellaneous expenses	0.00	-
Fair value loss on measurement of other payable	2,161.31	-
	2,182.21	**5.83**
Payment to auditor		
- Statutory audit fees	0.27	0.20
- Limited review fees	0.36	0.35
- Other services (certification fees)	-	0.00
Reimbursement of expenses	0.01	0.00
	0.64	**0.56**

Note 14 : Earnings per unit (EPU)

The following reflects the income and unit data used in the basic and diluted EPU computations:

(Rs. in Millions)

	For the year ended March 31, 2022	For the year ended March 31, 2021
Profit attributable to unit holders of the Fund for basic & diluted earnings	1,975.75	4,151.21
Weighted average number of unit for basic & diluted EPU* (in Millions)	84,29,14,666	78,47,08,356
Basic earning per unit (Amount in Rs.)	2.34	5.29
Diluted earning per unit (Amount in Rs.)	2.34	5.29

Note 15 : Capital and other commitments

There are no capital and other commitments as at March 31, 2022

Note 16 :Contingent liabilities

There are no contingent liabilities as at March 31, 2022

Note 17 : Details of dues to micro and small enterprises as per MSMED Act, 2006

The following details regarding Micro and small Enterprises has been determined to the extent such parties has been identified on the basis of information available with the Fund.

(Rs. in Millions)

Particulars	As at March 31, 2022	As at March 31, 2021
Principal amount remaining unpaid to any supplier as at the period end	-	-
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

a) MSME ageing schedule as at

Particulars	As at March 31, 2022	As at March 31, 2021
MSME disputed Dues	-	-
MSME Undisputed Dues	-	-
Less than 1 year	-	-
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total dues to micro and small enterprises as per MSMED Act, 2006	**-**	**-**

b) Ageing of creditors other than micro enterprises and small enterprises as at

Particulars	As at March 31, 2022	As at March 31, 2021
disputed Dues		
Undisputed Dues		
Less than 1 year	35.28	67.61
1-2 Years	46.43	
2-3 Years		
More than 3 years		
Total dues to creditors other than micro enterprises and small enterprises as at	**81.71**	**67.61**
b) out of the above unbilled amount	0.87	0.19

Note 18 : Operating segment

The Fund is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Fund’s activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

Note 19 : Other Statutory Information

i) The Company have not traded or invested in Crypto currency or Virtual Currency during the financial year.

ii) The Company does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the company.

iii) The Company does not have any transactions with companies struck off.

iv) The Company does not have any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961 (such as, search or survey or any other relevant provisions of the Income Tax Act, 1961.

v) The Company has not received any fund from any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Company shall:

(a) directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Funding Party (Ultimate Beneficiaries) or

(b) provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

vi) The Company has not advanced or loaned or invested (either from borrowed fund or share premium or any other source or kind of fund) by the company to or in any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Company shall:

(a) directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the company (Ultimate Beneficiaries) or

(b) provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

vii) The Company did not have any long-term contracts including derivative contract for which there were any material foreseeable losses.

vii) The Company has not declared a wilfull defaulter by any bank / financial institution or any other lender during the year.

Note 20 : Loans or advances to specified persons

Types of borrower	As at March 31, 2022		As at March 31, 2021	
	Amount outstanding*	% of Total ^	Amount outstanding*	% of Total ^
Promoters	-	-	-	-
Directors	-	-	-	-
KMPs	-	-	-	-
Related Parties	33,795.94	100%	32,064.56	100%
Total aggregate loans	**33,795.94**	**100%**	**32,064.56**	**100%**

* represents loan or advance in the nature of loan
^ represents percentage to the total Loans and Advances in the nature of loan

Note 21 : Particulars in respect of loans and advances in the nature of loans given to subsidiaries as required by Regulation 53(f) of the SEBI (Listing Obligation and Disclosure Requirements) Regulation, 2015

	As at March 31, 2022		As at March 31, 2021	
	Balances outstanding	Maximum balance Outstanding during the year	Balances outstanding	Maximum balance Outstanding during year
AE Tollway Limited	10,007.30	10,007.30	9,776.00	9,776.00
Kaithal Tollway Limited	9,456.38	9,456.38	8,905.28	8,905.28
Kishangarh Gulabpura Tollway Limited	106.00	106.00	30.00	30.00
Udaipur Tollway Limited	214.41	214.41	-	-
CG Tollway Limited	316.30	316.30	2.00	2.00
IRB Hapur Muradabad Tollway Limited	37.26	37.26	3.50	3.50
IRB Westcoast Tollway Limited	5,116.98	5,116.98	4,958.98	4,958.98
Solapur Yedeshi Tollway Limited	4,024.00	4,024.00	4,020.00	4,020.00
Yedeshi Aurangabad Tollway Limited	4,517.30	4,517.30	4,368.80	4,368.80

Note 22 : Basis of preparation of financial statements

The Trust has presented these standalone financial information (for all the periods presented there in) in accordance with the requirement of Schedule III - of the Companies Act , 2013 including amendments thereto , effective from April 01,2021.

Note 23 : Related party transaction

I. List of Related Parties

i. Subsidiaries/ SPVs	AE Tollway Limited
	CG Tollway Limited
	Hapur Muradabad Tollway Limited
	IRB Westcoast Tollway Limited
	Kishangarh Gulabpura Tollway Limited
	Kaithal Tollway Private Limited
	Solapur Yedeshi Tollway Limited
	Udaipur Tollway Limited
	Yedeshi Aurangabad Tollway Limited
ii. Parties to the Fund *	IRB Infrastructure Developers Limited (Sponsor and Project Manager)
	MMK Toll Road Private Limited (Investment Manager)
	IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)

iii. Subsidiaries Company of Sponsor and Project Manager

Mhaiskar Infrastructure Private Limited
Modern Road Makers Private Limited
IRB Goa Tollway private Limited

***As per Invit Regulation**

iii. Promoters/ Directors of the parties to the Fund specified in (ii) above

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manage)**	**MMK Toll Road Private Limited (Investment Manager)**	IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
Promoters	Mr. Virendra D. Mhaiskar	IRB Infrastructure Developers Limited	IDBI Bank Limited
	Mrs. Deepali V. Mhaiskar		Life Insurance Corporation of India
	Virendra D. Mhaiskar HUF		General Insurance Corporation of India
Directors	Mr. Virendra D. Mhaiskar, Chairman and Managing Director	Virendra D Mhaiskar	Mr. J. Samuel Joseph (w.e.f 26.11. 2019)
	Mrs. Deepali V. Mhaiskar, Whole Time Director	Boon Chin Hau	Mr. Ravishankar G. Shinde
	Mr. Mukeshlal Gupta, Joint Managing Director (utpo 29 December 2021)		Ms. Madhuri J. Kulkarni
	Mr. Sudhir Rao Hoshing, Joint Managing Director (utpo 29 December 2021) and Chief Executive Officer		Mr. Swapan Kumar Bagchi
	Mr. Jose Angel Tamariz Martel Goncer, Additional Non-Executive Director (wef 29 Deember 2021)		Ms Padma Betai
	Mr. Carlos Ricardo Ugarte Cruz Coke, Additional Non-Executive Director (wef 29 Deember 2021)		Ms. Jayashree Ranade
			Ms. Sashikala Muralidharan (till 16.01. 2020)
	Independent directors	**Independent directors**	
	Mr. Chandrashekhar S. Kaptan	K G Krishnamurthy	
	Mr. Sunil H. Talati	Ranjana Paranjape	
	Mr. Sandeep J. Shah		
	Ms. Priti Savla, Independent Director (wef February 10, 2022)		
	Mrs. Heena Raja, Independent Director (utpo February 10, 2022)		

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022

II) Related party transaction during the year

(Rs. in Millions)

Sr. No.	Particulars	Relation	Year ended March 31, 2022	Year ended March 31, 2021
1	**Equity Investment**		**615.00**	**1,205.00**
	Hapur Muradabad Tollway Limited	Subsidiary	615.00	1,205.00
2	**Subordinated debt**		**2,264.49**	**4,894.70**
	CG Tollway Limited	Subsidiary	240.30	270.00
	Hapur Muradabad Tollway Limited	Subsidiary	1,765.00	4,112.50
	IRB Westcoast Tollway Limited	Subsidiary	-	2.20
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	510.00
	Udaipur Tollway Limited	Subsidiary	259.19	-
3	**Long term loan**		**48.71**	**48.71**
	Kaithal Tollway Private Limited	Subsidiary	48.71	48.71
4	**Short Term Loan given**		**1,682.67**	**1,810.28**
	AE Tollway Limited	Subsidiary	231.30	247.59
	IRB Hapur Muradabad Tollway Limited	Subsidiary	33.76	3.50
	IRB Westcoast Tollway Limited	Subsidiary	158.00	958.98
	Kaithal Tollway Limited	Subsidiary	502.40	179.41
	Solapur Yedeshi Tollway Limited	Subsidiary	4.00	20.00
	Udaipur Tollway Limited	Subsidiary	214.41	-
	CG Tollway Limited	Subsidiary	314.30	2.00
	Kishangarh Gulabpura Tollway Limited	Subsidiary	76.00	30.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	148.50	368.80
5	**Short Term Loan transferred to Sub debt**		**-**	**29,829.67**
	AE Tollway Limited	Subsidiary	-	5,900.88
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	29.46
	IRB Westcoast Tollway Limited	Subsidiary	-	6,975.87
	Kaithal Tollway Limited	Subsidiary	-	1,146.04
	Solapur Yedeshi Tollway Limited	Subsidiary	-	1,476.20
	Udaipur Tollway Limited	Subsidiary	-	4,453.87
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	9,847.36
6	**Unit Capital Issued**		**1,946.33**	**2,603.81**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1,946.33	2,603.81
7	**Unsecured Loan / other payable repaid**		**-**	**5,106.67**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	-	5,105.50
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project Manager	-	1.17
8	**Interest income**		**4,200.00**	**4,200.00**
	Solapur Yedeshi Tollway Limited	Subsidiary	560.00	560.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	560.00	560.00
	Kaithal Tollway Limited	Subsidiary	1,186.02	1,186.02
	IRB Westcoast Tollway Limited	Subsidiary	560.00	560.00
	AE Tollway Limited	Subsidiary	1,333.98	1,333.98

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022

II) Related party transaction during the year

(Rs. in Millions)

Sr. No.	Particulars	Relation	Year ended March 31, 2022	Year ended March 31, 2021
9	**Trade payable**		**12.88**	**67.43**
	MMK Toll Road Pvt Limited	Investment Manager	12.88	67.43
10	**Other Receivable**		**0.89**	**53.51**
	Solapur Yedeshi Tollway Limited	Subsidiary	-	29.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	10.50
	IRB Westcoast Tollway Limited	Subsidiary	-	13.92
	Udaipur Tollway Limited	Subsidiary	0.89	0.09
11	**Unsecured Loan received**		**4,759.00**	**3,677.76**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	4,759.00	3,677.76
12	**Unsecured Loan paid**		**4,828.83**	-
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	4,828.83	-
13	**Expenses incurred on our behalf of (reimbursement)**		**1.77**	-
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1.77	-
14	**Other Payable**		**2,210.02**	**2,492.85**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	2,161.31	2,444.14
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project Manager	48.71	48.71
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project Manager	-	
	IRB Goa Tollway Private Limited	Subsidiaries Company of Sponsor and Project Manager	-	

III) Related party outstanding balances

(Rs. in Millions)

Sr. No.	Particulars	Relation	As on March 31,2022	As on March 31,2021
1	**Equity Investment**		**21,000.01**	**20,385.01**
	AE Tollway Limited	Subsidiary	4,365.00	4,365.00
	CG Tollway Limited	Subsidiary	2,035.00	2,035.00
	Hapur Muradabad Tollway Limited	Subsidiary	3,715.00	3,100.00
	IRB Westcoast Tollway Limited	Subsidiary	1,741.94	1,741.94
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,555.00	1,555.00
	Kaithal Tollway Private Limited	Subsidiary	3,280.00	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	982.50	982.50
	Udaipur Tollway Limited	Subsidiary	1,168.00	1,168.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	2,157.57	2,157.57
2	**Subordinated debt**		**69,929.79**	**67,665.30**
	AE Tollway Limited	Subsidiary	10,265.88	10,265.88
	CG Tollway Limited	Subsidiary	2,727.80	2,487.50
	Hapur Muradabad Tollway Limited	Subsidiary	9,414.76	7,649.76
	IRB Westcoast Tollway Limited	Subsidiary	12,203.92	12,203.92
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,809.50	1,809.50
	Kaithal Tollway Private Limited	Subsidiary	4,426.04	4,426.04
	Solapur Yedeshi Tollway Limited	Subsidiary	4,423.70	4,423.70
	Udaipur Tollway Limited	Subsidiary	8,338.40	8,079.21
	Yedeshi Aurangabad Tollway Limited	Subsidiary	16,319.79	16,319.79
3	**Long term loan**		**30,302.98**	**30,254.28**
	AE Tollway Limited	Subsidiary	9,528.41	9,528.41
	IRB Westcoast Tollway Limited	Subsidiary	4,000.00	4,000.00
	Kaithal Tollway Private Limited	Subsidiary	8,774.57	8,725.87
	Solapur Yedeshi Tollway Limited	Subsidiary	4,000.00	4,000.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	4,000.00	4,000.00
4	**Short Term Loan**		**3,492.95**	**1,810.28**
	AE Tollway Limited	Subsidiary	478.89	247.59
	IRB Hapur Muradabad Tollway Limited	Subsidiary	37.26	3.50
	IRB Westcoast Tollway Limited	Subsidiary	1,116.98	958.98
	Kaithal Tollway Limited	Subsidiary	681.81	179.41
	Solapur Yedeshi Tollway Limited	Subsidiary	24.00	20.00
	Udaipur Tollway Limited	Subsidiary	214.41	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	517.30	368.80
	CG Tollway Limited	Subsidiary	316.30	2.00
	Kishangarh Gulabpura Tollway Limited	Subsidiary	106.00	30.00
5	**Other Payable**		**35,167.02**	**32,957.00**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	31,535.05	29,373.73
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project	302.98	254.28
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project	1,784.13	1,784.13
	IRB Goa Tollway private Limited	Subsidiaries Company of Sponsor and Project Manager	1,544.86	1,544.86
6	**Other payable (Reimbursement of Expenses incurred on our behalf)**		**1.77**	-
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1.77	-

III) Related party outstanding balances

(Rs. in Millions)

7	**Other Receivable**		**54.40**	**53.51**
	Solapur Yedeshi Tollway Limited	Subsidiary	29.00	29.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	10.50	10.50
	IRB Westcoast Tollway Limited	Subsidiary	13.92	13.92
	Udaipur Tollway Limited	Subsidiary	0.99	0.09
8	**Interest Receivable**		**5,556.27**	**2,181.27**
	Solapur Yedeshi Tollway Limited	Subsidiary	547.40	352.40
	Yedeshi Aurangabad Tollway Limited	Subsidiary	636.00	151.00
	Kaithal Tollway Limited	Subsidiary	1,693.72	587.69
	IRB Westcoast Tollway Limited	Subsidiary	992.00	432.00
	AE Tollway Limited	Subsidiary	1,687.16	658.18
9	**Trade payable**		**80.31**	**67.43**
	MMK Toll Road Pvt Limited	Investment Manager	80.31	67.43
10	**Unsecured Loan / other payable**		**3,607.93**	**3,677.76**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	3,607.93	3,677.76

Note 24 : Fair Values

Financial assets and liabilities

The carrying values of financials instruments of the Fund are reasonable and approximations of fair values.

The accounting classification of each category of financial instruments, their carrying amounts and the categories of financial assets and liabilities measured at fair value, are set out below:

(Rs. in Millions)

	Carrying amount	Fair Value	Carrying amount	Fair Value
	As at March 31, 2022	As at March 31, 2022	As at March 31, 2021	As at March 31, 2021
Financial assets				
Financial assets measured at amortised cost				
Loans	33,795.94	33,795.94	32,064.56	32,064.56
Other financial assets	5,610.67	5,610.67	2,234.78	2,234.78
Financial assets measured at fair value through statement of Profit & Loss				
Investments in mutual funds	20.04	20.04	50.00	50.00
Financial assets measured at amortised cost				
Cash and cash equivalents	0.25	0.25	12.65	12.65
Other Bank balances	-	-	-	-
Financial liabilities				
Trade payables	81.71	81.71	67.61	67.61
Borrowings	3,607.93	3,607.93	3,677.76	3,677.76
Other financial liabilities	35,168.79	35,168.79	32,957.00	32,957.00

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the company has determined that market participants would take into account when pricing the investments.

The Fund is required to present the Statement of total assets at fair value and Statement of total returns at fair value as per SEBI Circular No. CIR/IMD/DF/114/2016 dated October 20, 2016 as a part of these financial statements - Refer Statement of Net assets at fair value and Statement of Total Returns at fair value.

Note 25 : Fair Value Hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price is active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly.

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

There were no transfers between Level 1 and Level 2 during the year. No financial assets/ liabilities that are measured at fair value were Level 3 fair value measured.

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2022:

(Rs. in Millions)

	As at March 31, 2022	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Loans	33,795.94	-	-	33,795.94
Other Financial assets	5,610.67	-	-	5,610.67
Investments in mutual funds(Quoted)	20.04	20.04	-	-
Liabilities				
Trade payable	81.71	-	-	81.71
Other financial liabilities	35,168.79	-	-	35,168.79

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2021:

(Rs. in Millions)

	As at March 31, 2021	Fair value measurement at end of the reporting year using		
		Level 1	**Level 2**	**Level 3**
Assets				
Loans	32,064.56	-	-	32,064.56
Other Financial assets	2,234.78	-	-	2,234.78
Investments in mutual funds(Quoted)	50.00	50.00	-	-
Liabilities				
Trade payable	67.61	-	-	67.61
Other financial liabilities	32,957.00	-	-	32,957.00

Note 26 : Financial risk management objectives and policies

The fund's risk management policies are established to identify and analyse the risks faced by the fund, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the fund's activities.

The Board of Directors of Investment Manager have overall responsibility for the establishment and oversight of the fund's risk management framework.

In performing its operating, investing and financing activities, the fund is exposed to the Credit risk, Liquidity risk and Market risk.

a. Market Risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits.

Credit risk

Credit risk is the risk that a counter party will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Fund is exposed to credit risk from its investing activities including loans to subsidiaries, deposits with banks and other financial instruments. As at March 31, 2022, the credit risk is considered low since substantial transactions of the Fund are with its subsidiaries.

Interest Rate Risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The fund's exposure to the risk of changes in market interest rates relates primarily to the fund's long-term debt obligations with floating interest rates.

c. Liquidity risk

Liquidity risk is the risk that the Fund may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Fund's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements.

The Fund closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt and overdraft from banks at an optimised cost.

The liquidity risk is managed on the basis of expected maturity dates of the financial liabilities. The average credit period taken to settle trade payables is about 30 to 90 days. The other payables are with short-term durations. The carrying amounts are assumed to be a reasonable approximation of fair value. The following table analyses financial liabilities by remaining contractual maturities:

(Rs. in Millions)

March 31, 2022	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Borrowings	-		3,607.93		-	**3,607.93**
Other financial liabilities			-	35,168.79		**35,168.79**
Trade payables	-		81.71	-	-	**81.71**
Total	**-**	**-**	**3,689.64**	**35,168.79**	**-**	**38,858.44**

March 31, 2021	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Borrowings	-		3,677.76		-	**3,677.76**
Other financial liabilities			8,239.25	24,717.75		**32,957.00**
Trade payables	-	67.61	-	-	-	**67.61**
Total	**-**	**67.61**	**11,917.01**	**24,717.75**	**-**	**36,702.38**

At present, the fund does expects to repay all liabilities at their contractual maturity. In order to meet such cash commitments, the operating activity is expected to generate sufficient cash inflows.

Note 27 : Capital management

Capital includes equity attributable to the equity holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise shareholder value. The company manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the company may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the period ended March 31, 2022
The company monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

(Rs. in Millions)

	As at March 31, 2022	As at March 31, 2021
Borrowings	3,607.93	3,677.76
Less: cash and cash equivalents (including unpaid dividend account)	(0.25)	(12.65)
Net debt (A)	**3,607.69**	**3,665.11**
Unit capital	85,504.33	81,688.00
Other equity	5,992.74	4,020.25
Total equity (B)	**91,497.07**	**85,708.25**
Capital and net debt C = A + B	**95,104.76**	**89,373.36**
Gearing ratio (%) (C / A)	**3.79%**	**4.10%**

In order to achieve this overall objective, the fund's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period.

Note 28 : Significant accounting judgement, estimates and assumptions

The preparation of the Fund's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities and the accompanying disclosures and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in out comes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Judgement

In the process of applying the Fund’s accounting policies, management has made the following judgements, which have the most significant effect on the amounts recognised in the financial statements.

Classification of unit holders Funds

Under the provisions of the InvIT Regulations, Fund is required to distribute to Unit holders not less than ninety percent of the net distributable cash flows of Fund for each financial year. Accordingly, a portion of the unit holders’ Funds contains a contractual obligation of the Fund to pay to its Unit holders cash distributions. The Unit holder's Funds could therefore have been classified as compound financial instrument which contain both equity and liability components in accordance with Ind AS 32-Financial Instruments: Presentation.
However, in accordance with SEBI Circulars(No.CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No.CIR/IMD/DF/127/2016 dated 29-Nov-2016) issued under the InvIT Regulations, the unit holders’ Funds have been classified as equity in order to comply with the mandatory requirements of Section H of Annexure A to the SEBI Circular dated 20-Oct-2016 dealing with the minimum disclosures for key financial statements. In line with the above, the income distribution payable to unit holders is recognized as liability when the same is approved by the Investment Manager.

Estimates and assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities or fair value disclosures within the next financial year, are described below. The Fund based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Fund. Such charges are reflected in the assumptions when they occur.

Impairment of non-financial assets

Non-financial assets of the Fund primarily comprise of investments in subsidiaries, Impairment exists when the carrying value of an asset or cash generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The recordable amounts for the investments in subsidiaries are based on value in use of the underlying projects. The value in use calculation is based on a DCF model. The cash flows are derived from budgets / forecasts over the life of the projects.

Note 29 : COVID 19

The outbreak of Coronavirus (COVID-19) pandemic globally and in India is causing significant disturbance and slowdown of economic activity. As per the directions of the Ministry of Road Transport & Highways (MoRTH)/ National Highway Authority of India (NHAI), in order to follow MHA guidelines about commercial and private establishment in the wake of COVID-19 epidemic in the country, operations at the toll plaza of the Group were closed down w.e.f. 26th March, 2020. The toll operations were resumed from 20th April, 2020 by ensuring compliance with preventive measures in terms of guidelines/ instructions issue by Govt. of India to contain spread of Covid -19. Due to this, traffic for the toll road has been impacted. Management believes this is temporary and expects traffic will be normalised looking at the recent toll collection. In accordance with the Concession Agreement and NHAI policy no. 8.3.33/2020 and 8.4.20/2020 dated 26th May, 2020, the Group is eligible for extension of concession period with NHAI towards loss of revenue due to COVID-19 pandemic and NHAI is also extending COVID-19 loan to the Concessionaire for shortfall in cashflow. The management has assessed and deretemined that considering the nature of its operations and overall revenue model, COVID-19 does not have any material impact on the Company's financial position as at March 31, 2022 and its financial performance for the period then end.

Note 30 : Events after reporting period

There is no subsequent event after the reporting period which requires adjustments to the financial statements.

Note 31 : Previous period comparatives

Previous period's figures have been regrouped/reclassified, wherever necessary, to confirm to current period's classification.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 06/05/2022

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 06/05/2022

gokhale & sathe (regd.)
chartered accountants
308/309, Udyog Mandir No. 1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016

INDEPENDENT AUDITOR'S REPORT

To the Unit Holders of IRB Infrastructure Trust

Report on the Audit of the Standalone Ind AS Financial Statements

Opinion

We have audited the accompanying standalone financial statements of IRB Infrastructure Trust ("the InvIT" or "the Trust"), which comprise the Balance Sheet as at 31 March 2021, the Statement of Profit and Loss including Other Comprehensive Income, the Statement of Cash Flows and the Statement of Changes in Unit Holders' Equity for the year ended 31 March 2021 ("the financial period"), the Statement of Net Assets at fair value and the Statement of Total Returns at fair value as at 31 March 2021, and notes to the standalone financial statements including a summary of significant accounting policies and other explanatory information (hereinafter referred to as "the standalone financial statements").

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid standalone financial statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI InvIT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards prescribed under rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended ("Ind AS") and other accounting principles generally accepted in India, of the state of affairs of the Trust as at 31 March 2021, its profit including other comprehensive income, its cash flows, changes in Unit holders' equity for the financial period, the net assets and the total returns as at 31 March 2021.

Basis for Opinion

We conducted our audit of the standalone financial statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Standalone Financial Statements section of this report. We are independent of the Trust in accordance with the code of ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the standalone financial statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the code of ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the standalone financial statements.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the standalone financial statements of the financial period. These matters were addressed in the context of our audit of the standalone financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

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Particulars	How they were addressed in our audit
<u>Gain/Loss on fair value measurement of other payable / deferred consideration payable to IRB Group.</u> Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims. Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head 'Gain/Loss on fair value measurement of other payable'.	• We reviewed Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs. • We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made. • We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein. • We also reviewed the reasonableness of the variables applied in the said computation. • Based on the above, the fair value of liability to Sponsor estimated by the valuer taking into consideration the weighted average of probabilities of realization has been validated.
<u>Impairment Testing</u> The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment. The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights.	• We evaluated management's assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management. • Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue. • Evaluated the potential changes in major components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were suitable.

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Accordingly, the evaluation of impairment of toll collection rights has been determined a key audit matter.	• Assessed the appropriateness of the weighted average cost of capital used in determining recoverable amount. • Performed sensitivity analysis of key assumptions used in valuation. • Tested the arithmetical accuracy of the model.

Information Other than the Standalone Financial Statements and Auditor's Report thereon

The Board of Directors of Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations, but does not include the standalone financial statements and our report thereon.

Our opinion on the standalone financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.
In connection with our audit of the standalone financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the standalone financial statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Board of Directors of Investment Manager for the Standalone Financial Statements

The Board of Directors of Investment Manager is responsible for the preparation of these standalone financial statements that give a true and fair view of the financial position as at 31 March 2021, financial performance including other comprehensive income, cash flows and changes in unit holders' equity for the year ended 31 March 2021, the net assets and the total returns as at 31 March 2021 in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended and relevant rules issued thereunder read with the SEBI InvIT Regulations. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the SEBI InvIT Regulations for safeguarding of the assets of the Trust and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the standalone financial statements that give a true and fair view and are free from material misstatement, whether due to fraud and error which have been used for the purpose of preparation of the standlone financial statements by the management of the Fund, as aforesaid.

In preparing the standalone financial statements, the Board of Directors of Investment Manager is responsible for assessing the Trust's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager either intends to liquidate the Trust or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of Investment Manager are also responsible for overseeing the Trust's financial reporting process.

Auditor's Responsibility for the Audit of the Standalone Ind AS Financial Statements

Our objectives are to obtain reasonable assurance whether the standalone financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the standalone financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.

- Obtain an understanding of internal financial control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of such controls.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Board of Directors of Investment Manager.

- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Trust's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Trust to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Materiality is the magnitude of misstatements in the standalone financial statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the standalone financial statements of the current period and are therefore the key audit matters. We describe these matters in our report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

Based on our audit and as required by SEBI InvIT Regulations, we report that:

a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit;

b. The Balance Sheet, the Statement of Profit and Loss, the Statement of Cash Flows, Statement of Changes in Unit Holder's Equity, the Statement of Net Assets at fair value and the Statement of Total Returns at fair value dealt with by this Report are in agreement with the books of account of the Trust; and

c. In our opinion, the aforesaid financial statements comply with the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For
Gokhale & Sathe
Chartered Accountants
FRN: 103264W

SD/-
CA. Chinmaya Deval
Partner
Membership No. 148652
UDIN: 21148652AAAAHU3427
Date: 24 May 2021
Place: Mumbai

IRB Infrastructure Trust
Balance Sheet as at March 31, 2021

(Rs. in Millions)

		Note No.	March 31, 2021	March 31, 2020
I	**ASSETS**			
(1)	**Non-current assets**			
	Financial assets	4		
	i) Investments	4.1	88,050.31	52,120.94
	ii) Loans	4.2	30,254.28	30,205.57
	Total non-current assets		**1,18,304.59**	**82,326.51**
(2)	**Current assets**			
	Financial assets	5		
	i) Investments	5.1	50.00	-
	ii) Cash and cash equivalents	5.2	12.65	0.01
	iii) Loans	5.3	1,810.28	29,829.67
	iv) Other financial assets	5.4	2,234.78	-
	Other current assets	6	0.03	-
	Total current assets		**4,107.74**	**29,829.68**
	TOTAL ASSETS		**1,22,412.32**	**1,12,156.19**
II	**EQUITY AND LIABILITIES**			
	Equity			
	Unit capital	7	81,688.00	76,582.50
	Other equity	8	4,020.25	(27.16)
	Total unit holder's equity		**85,708.25**	**76,555.34**
(1)	**Non-current liabilities**			
	Financial liabilities	9		
	i) Other financial liabilities	9	24,717.75	28,458.95
	Total non- current liabilities		**24,717.75**	**28,458.95**
(2)	**Current liabilities**			
	Financial liabilities	10		
	i) Borrowings	10.1	3,677.76	-
	ii) Trade payables	10.2		
	a) total outstanding dues of creditors other than micro enterprises and small enterprises		67.61	27.14
	iii Other financial liabilities	10.3	8,239.25	7,114.74
	Other Current liabilities	11	1.70	0.02
	Total current liabilities		**11,986.32**	**7,141.90**
	Total liabilities		**36,704.08**	**35,600.85**
	TOTAL EQUITY AND LIABILITIES		**1,22,412.32**	**1,12,156.19**
	Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Chinmaya Deval
Partner

Membership No.: 148652

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Finance officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date : 24/05/2021

Place : Mumbai
Date : 24/05/2021

IRB Infrastructure Trust

Statement of Profit and Loss for the year ended March 31, 2021

(Rs. in Millions)

	Note No.	For the Year ended March 31, 2021	One month ended March 31, 2020
Income			
Other income	12	4,203.30	-
TOTAL INCOME		**4,203.30**	**-**
Expenses			
Investment Manager Fees		46.25	26.92
Other expenses	13	5.83	0.24
TOTAL EXPENSES		**52.08**	**27.16**
Profit / (Loss) before tax		**4,151.21**	**(27.16)**
Tax expenses			
Current tax		-	-
Profit / (Loss) after tax (A)		**4,151.21**	**(27.16)**
Other comprehensive income / (loss) for the year (net of tax)			
Item that will not to be reclassified to profit or loss in subsequent year			
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)		-	-
Other comprehensive income/(loss) for the year (net of tax) (B)		-	-
Total comprehensive income for the year, net of tax : (A+B)		**4,151.21**	**(27.16)**
Earnings per unit			
Basic		**5.29**	**(0.36)**
Diluted		**5.29**	**(0.36)**
Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Chinmaya Deval
Partner
Membership No.: 148652

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Finance officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date : 24/05/2021

Place: Mumbai
Date : 24/05/2021

IRB Infrastructure Trust
Statement of changes in Equity for the year ended March 31, 2021

	As at March 31, 2021	As at March 31, 2020
		(Rs. in Millions)
a. Unit Capital		
At the beginning of the year	76,582.50	-
Issued during the year	5,105.50	76,582.50
At the end of the year	**81,688.00**	**76,582.50**
b. Other Equity		
Retained earnings		
At the beginning of the year	(27.16)	-
Profit for the year	4,151.21	(27.16)
Unit issue expenses	(103.81)	-
At the end of the year	**4,020.25**	**(27.16)**

Summary of Significant accounting policies (refer note no.3)

See accompanying notes to the financial statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Chinmaya Deval
Partner
Membership No.: 148652

Place: Mumbai
Date : 24/05/2021

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Finance officer

SD/-
Kaustubh Shevade
Company secretary

Place : Mumbai
Date : 24/05/2021

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2021

(Rs. in Millions)

Particulars	For the Year ended March 31, 2021	For year ended March 31, 2020
Cash flow from operating activities		
Profit / (Loss) before tax	4,151.21	(27.16)
Adjustments to reconcile profit before tax to net cash flows:		
Profit on sale of investments	(0.43)	-
Interest income on		
- Others	(4,200.00)	-
Operating profit/(loss) before working capital changes	**(49.22)**	**(27.16)**
Movement in working capital:		
Increase/(decrease) in trade payables	40.48	27.14
Increase/(decrease) in other financial liabilities	(2,616.69)	
Increase/(decrease) in other current liabilities	1.68	0.02
(Increase)/decrease in Other current assets	(0.03)	-
(Increase)/decrease in loans	28,019.39	
(Increase)/decrease in Other Financial assets	(2,234.78)	-
Cash generated from/(used in) operations	**23,160.83**	**0.00**
Direct taxes paid (net of refunds)	-	-
Net cash flows from/(used in) operating activities	**23,160.83**	**0.00**
B. Cash flows from investing activities		
Investment in subsidiaries	(1,205.00)	
Investment in sub debt of subsidiaries	(34,724.37)	(869.00)
Loan given to subsidiaries Long term	(48.71)	(30,000.00)
Loan given to subsidiaries short term	-	-
Consideration paid to Sponsor		(7,525.40)
Interest received from others	4,200.00	
Gain on sale of Investment	0.43	
Purchase of Investment	(50.00)	
Net cash flows from/(used in) investing activities	**(31,827.64)**	**(38,394.40)**
C. Cash flow from financing activities		
Other Equity		
Proceeds from issuance of unit capital	5,105.50	37,525.40
Proceeds from Sponsors		869.01
Proceeds from curent borrowings	3,677.76	-
Unit Issue Expenses	(103.81)	
Dividend Paid on Equity Shares	-	-
Tax on Equity Dividend paid	-	-
Net cash flows from/(used in) financing activities	**8,679.45**	**38,394.41**
Net increase/(decrease) in cash and cash equivalents (A+B+C)	**12.64**	**0.01**
Cash and cash equivalents at the beginning of the year	0.01	-
Cash and cash equivalents at the end of the period (refer 5.2)	**12.65**	**0.01**
Components of cash and cash equivalents		
Cash on hand	-	-
Balances with scheduled banks		
- On Current Account	12.65	0.01
Total Cash and cash equivalents (refer note 5.2)	**12.65**	**0.01**

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2021

Notes:

1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. Reconciliation between opening and closing balances for liabilities arising from financing activities
4. The cash flow statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows" as notified under section 133 of the Companies Act, 2013.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Chinmaya Deval
Partner
Membership No.: 148652

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Finance officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date : 24/05/2021

Place : Mumbai
Date : 24/05/2021

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Statement of Net Asset at Fair Value

	As at March 31, 2021		As at March 31, 2020	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	1,22,412.32	1,48,712.32	1,12,156.19	1,32,679.87
B. Liabilities (at book value)	36,704.08	36,704.08	35,600.85	35,600.85
C. Net Assets (A-B)	85,708.25	1,12,008.25	76,555.34	97,079.02
D. Number of units (in millions)	816.88	816.88	765.83	765.83
E. NAV (C/D) (Amount in Rs.)	**104.92**	**137.12**	**99.96**	**126.76**

B. Statement of total returns at Fair Value

Particulars	**For the year ended March 31, 2021**	**For the year ended March 31, 2020**
Total Comprehensive Income (As per the Statement of Profit and Loss)	4,151.21	(27.16)
Add/(less): Other Changes in Fair Value	26,300.00	20,523.68
Comprehensive Income -	**30,451.21**	**20,496.52**

Notes :

Fair value of assets as at March 31, 2020 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Chinmaya Deval
Partner
Membership No.: 148652

Place: Mumbai
Date : 24/05/2021

For and on behalf of MMK Toll Road Private Limited
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Kaustubh Shevade
Company secretary

Place: Mumbai
Date : 24/05/2021

IRB Infrastructure Trust

Notes to financial statements for the year ended March 31, 2021

1. Trust Information and Nature of Operations

IRB Infrastructure Trust (the "Fund" / "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under Indian Trust Act, 1882 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Trust is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registration certificate from SEBI having registration number IN/InviT/19-20/0012

The Fund has been formed to invest in infrastructure assets primarily being in the road sector in India. The Fund's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Fund's portfolio comprises of nine road projects are listed below:-

The Fund had acquired the following projects from the Sponsor which are road infrastructure projects developed on DBFOT basis.

Sr. No.	Project SPV Name
1	AE Tollway Limited (AETL)
2	CG Tollway Limited (CGTL)
3	IRB Hapur Moradabad Tollway Limited (IRBHMTL)
4	IRB Westcoast Tollway Limited (IRBWTL)
5	Kishangarh Gulabpura Tollway Limited (KGTL)
6	Kaithal Tollway Limited (KTL)
7	Solapur Yedeshi Tollway Limited (SYTL)
8	Udaipur Tollway Limited (UTL)
9	Yedeshi Aurangabad Tollway Limited (YATL)

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.

The financial statements were authorised for issue in accordance with resolution passed by the board of directors of the Investment manager on May 24, 2021.

2. Basis of preparation

The financial statements of IRB Infrastructure Trust have been prepared in accordance with Indian Accounting Standards as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended, prescribed under Section 133 of the Companies Act, 2013 ("Ind AS") read with SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended and the circulars issued thereunder ("InvIT Regulations") and other accounting principles generally accepted in India.

The financial statements have been prepared on an accrual basis and under the historical cost convention except for certain financial assets and liabilities (refer accounting policy regarding financial instruments) which have been measured at fair value.

The financial statements are presented in Indian Rupee ('INR') which is the functional currency of the Fund and all values are rounded to the nearest lakhs, except when otherwise indicated. Wherever the amount represented '0' (zero) construes value less than Rupees five hundred

3. Summary of significant accounting policies

3.1. Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the results of operations during the reporting period end. Although these estimates are based upon management’s best knowledge of current events and actions, actual results could differ from these estimates.

3.2. Current versus non-current classification

The Fund presents assets and liabilities in the balance sheet based on current/ non-current classification.
An asset is treated as current when it is:
- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle

- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents. The Fund has identified twelve months as its operating cycle.

3.3. Revenue recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Fund and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the fair value of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duties collected on behalf of the government.

The specific recognition criteria described below must also be met before revenue is recognised:

Interest income
Revenue is recognised on a time proportion basis taking into account the amount outstanding and the rates applicable. For all debt instruments measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR).

Dividends
Revenue is recognised when the Fund's right to receive the payment is established, which is generally when shareholders approve the dividend.

3.4. Taxes

Current income tax
Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Fund operates and generates taxable income.

Current income tax relating to items recognised outside the Statement of Profit and Loss is recognised outside the Statement of Profit and Loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction affects neither the accounting profit nor taxable profit or loss

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity).

Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Sales/value added tax and goods and service tax paid on acquisition of assets or on incurring expenses

Expenses and assets are recognised net of the amount of sales/value added taxes and goods and service tax paid, except:

When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet.

3.5. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences to the extent regarded as an adjustment to the borrowing costs.

3.6. Provisions

Provisions are recognised when the Fund has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Fund expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the Statement of Profit and Loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

3.7. Contingent liabilities and contingent assets

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Fund or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Fund does not recognise a contingent liability but discloses its existence in the financial statements.
A contingent assets is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.
Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.8. Financial instrument

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement

All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through Statement of Profit and Loss, directly attributable transaction cost to the acquisition of the financial asset. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognised on the trade date, i.e., the date that the Fund commits to purchase or sell the asset.

Subsequent measurement

For purposes of subsequent measurement, financial assets are classified in following categories;

- at amortised cost
- at fair value through profit or loss (FVTPL)
- at fair value through other comprehensive income (FVTOCI)

Financial Assets at amortised cost

A financial asset is measured at the amortised cost if both the following conditions are met:

a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

This category is the most relevant to the Fund. All the Loans and other receivables under financial assets (except Investments) are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

After initial measurement such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The losses arising from impairment are recognised in the Statement of Profit and Loss.

Financial Assets at Fair Value through Statement of Profit and Loss/Other comprehensive income

All investments in scope of Ind AS 109 are measured at fair value. The Fund has investment in Debt oriented mutual fund which are held for trading, are classified as at FVTPL. The Fund makes such election on an instrument by instrument basis. The

classification is made on initial recognition and is irrevocable. The gain/ loss on sale of investments are recognised in the Statement of Profit and Loss.
Instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of Profit and Loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a the Fund of similar financial assets) is primarily derecognised (i.e. removed from the Fund's balance sheet) when:
The rights to receive cash flows from the asset have expired, or
The Fund has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Fund has transferred substantially all the risks and rewards of the asset, or (b) the Fund has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Fund has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Fund continues to recognise the transferred asset to the extent of the Fund's continuing involvement. In that case, the Fund also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Fund has retained.

3.9. Impairment of assets

Impairment of financial assets

Expected credit losses are recognized for all financial assets subsequent to initial recognition other than financial assets in FVTPL category.

For financial assets other than trade receivables, as per Ind AS 109, the Fund recognizes 12 month expected credit losses for all originated or acquired financial assets if at the reporting date the credit risk of the financial asset has not increased significantly since its initial recognition. The expected credit losses are measured as lifetime expected credit losses if the credit risk on financial assets increases significantly since its initial recognition.

The impairment losses and reversals are recognized in Statement of Profit and Loss.

Impairment of non-financial assets

The Fund assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Fund estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset unless the asset does not generate cash inflows that are largely independent of those from other assets or Fund's assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Fund’s financial liabilities include trade and other payables, loans and borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Fund that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the statement of profit and loss.

Loans and borrowings

This is the category most relevant to the Fund. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are de-recognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

De-recognition

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the statement of profit and loss.

Offsetting of financial instruments
Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.10 Investment in subsidiaries

Investments (equity instruments as well as subordinate debt) in subsidiaries are carried at cost less accumulated impairment losses, if any. Where an indication of impairment exists, the carrying amount of the investment is assessed and written down immediately to its recoverable amount. On disposal of investments in subsidiaries, the difference between net disposal proceeds and carrying amounts are recognised in the Statement of Profit and Loss.

3.11Foreign currencies

The Fund's financial statements are presented in INR, which is also the Fund's functional currency. The Fund does not have any foreign operation and has assessed the functional currency to be INR.

Transactions and balances
Transactions in foreign currencies are initially recorded by the Fund at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

3.12 Fair value measurement

The Fund measures financial instruments, such as, derivatives at fair value at each balance sheet date.
Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:
► In the principal market for the asset or liability, or
► In the absence of a principal market, in the most advantageous market for the asset or liability.
The principal or the most advantageous market must be accessible by the Fund.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Fund uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

► Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities

► Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable

► Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Fund determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Fund's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Fund's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management of Investment Manager presents the valuation results to the Audit Committee and the Fund's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Fund has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.

- Disclosures for valuation methods, significant estimates and assumptions (note 27)
- Financial instruments (including those carried at amortised cost) (note 22 and 23)
- Quantitative disclosure of fair value measurement hierarchy (note 22 and 23)

3.13 Contributed Equity

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

3.14 Distribution to unit holders

The Fund recognises a liability to make cash distributions to unit holders when the distribution is authorised and a legal obligation has been created. As per the InvIT Regulations, a distribution is authorised when it is approved by the Board of Directors of the Investment Manager. A corresponding amount is recognised directly in equity.

3.15 Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.
For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, net of outstanding bank overdrafts as they are considered an integral part of the Fund's cash management.

3.16 Earnings Per Unit (EPU)

Basic earnings per unit are calculated by dividing the net profit for the year attributable to unit holders by the weighted average number of units outstanding during the year.

For the purpose of calculating diluted earnings per unit, the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

(Rs. in Millions)

	As at March 31, 2021	As at March 31, 2020
Note 4 : Financial assets (Non-current)		
4.1 Investments		
A) Investments at cost		
436,500,000 equity shares of AE Tollway Limited	4,365.00	4,365.00
203,500,000 equity shares of CG Tollway Limited	2,035.00	2,035.00
310,000,000 equity shares of IRB Hapur Moradabad Tollway Limited	3,100.00	1,895.00
174,194,303 equity shares of IRB Westcoast Tollway Limited	1,741.91	1,741.91
155,500,000 equity shares of Kishangarh Gulabpura Tollway Limited	1,555.00	1,555.00
328,000,000 equity shares of Kaithal Tollway Limited	3,280.00	3,280.00
98,250,000 equity shares of Solapur Yedeshi Tollway Limited	982.50	982.50
116,800,000 equity shares of Udaipur Tollway Limited	1,168.00	1,168.00
215,757,001 equity shares of Yedeshi Aurangabad Tollway Limited	2,157.60	2,157.60
Investment in equity instruments of related parties (unquoted)	**20,385.01**	**19,180.01**
Investments in sub debt of subsidiaries (unquoted)		
AE Tollway Limited	10,265.88	4,365.00
CG Tollway Limited	2,487.50	2,217.50
IRB Hapur Moradabad Tollway Limited	7,649.76	3,507.80
IRB Westcoast Tollway Limited	12,203.92	5,225.86
Kishangarh Gulabpura Tollway Limited	1,809.50	1,299.50
Kaithal Tollway Private Limited	4,426.04	3,280.00
Solapur Yedeshi Tollway Limited	4,423.70	2,947.50
Udaipur Tollway Limited	8,079.21	3,625.34
Yedeshi Aurangabad Tollway Limited	16,319.79	6,472.43
Subordinated debt to related parties (interest free)	**67,665.30**	**32,940.93**
Total non-current investments (A + B)	**88,050.31**	**52,120.94**
Aggregate amount of unquoted investments	**88,050.31**	**52,120.94**

Note : Rs 29,829.67 millions is transferred from Unsecured loan to Investment in Sub-Debt.

4.2 Loans		
(Unsecured, considered good, unless otherwise stated)		
AE Tollway Limited	9,528.41	9,528.41
IRB Westcoast Tollway Limited	4,000.00	4,000.00
Kaithal Tollway Limited	8,725.87	8,677.16
Solapur Yedeshi Tollway Limited	4,000.00	4,000.00
Yedeshi Aurangabad Tollway Limited	4,000.00	4,000.00
Total	**30,254.28**	**30,205.57**

(Rs. in Millions)

	As at March 31, 2021	As at March 31, 2020
Note 5 : Financial assets (current)		
5.1 Investments		
Investments in Mutual Funds (quoted) (FVTPL)	50.00	-
	50.00	**-**
5.2 Cash and cash equivalent		
Balances with banks:		
- In current accounts	12.65	0.01
	12.65	**0.01**
For the purpose of the statement of cash flows, cash and cash equivalents comprise the following:		
-On current accounts	12.65	0.01
5.3 Loans		
(Unsecured, considered good, unless otherwise stated)		
Loans to related parties		
AE Tollway Limited	247.59	5,912.47
IRB Hapur Moradabad Tollway Limited	3.50	29.46
IRB Westcoast Tollway Limited	958.98	6,975.87
Kaithal Tollway Limited	179.41	1,134.45
Solapur Yedeshi Tollway Limited	20.00	1,476.20
Udaipur Tollway Limited	-	4,453.87
CG Tollway Limited	2.00	
Kishangarh Gulabpura Tollway Limited	30.00	-
Yedeshi Aurangabad Tollway Limited	368.80	9,847.36
	1,810.28	**29,829.67**
5.4 Other financial assets		
(Unsecured, considered good, unless otherwise stated)		
Interest receivable from others	2,181.27	-
Other receivable		
- related parties	53.51	-
	2,234.78	**-**
Note 6 : Other current assets		
Advance given to suppliers		
- others	0.03	-
Total	**0.03**	**-**

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2021
Note 7 : Equity

	As at March 31,2021	As at March 31,2020
		(Rs. in Millions)
I. Unit capital		
a. Issued, subscribed and fully paid up Unit Capital		
Unit capital of Rs. 100 each issued, subscribed and fully paid up		
At the beginning the year	76,582.50	-
Issued during the year	5,105.50	76,582.50
At the end of the year	**81,688.00**	**76,582.50**

II. Reconciliation of the number of units outstanding and the amount of unit capital:

	As at March 31,2021		As at March 31,2020	
	No. of units	Amount in Millions	No. of units	Amount in Millions
At the beginning of the year	76,58,25,000	76,582.50	-	-
Issued during the year	5,10,55,000	5,105.50	76,58,25,000	76,582.50
At the end of the year	**81,68,80,000**	**81,688.00**	**76,58,25,000**	**76,582.50**

Note :8 Other Equity

	As at March 31,2021	As at March 31,2020
Retained earnings		
At the beginning of the year	(27.16)	-
Profit/(loss) for the year	4,151.21	(27.16)
Unit issue expenses	(103.81)	-
Total Other Equity	**4,020.25**	**(27.16)**

(Rs. in Millions)

	As at March 31, 2021	As at March 31, 2020
9 Other financial liabilities		
Other Payable		
- related party	24,717.75	28,458.95
	24,717.75	**28,458.95**
Note 10 : Current financial liabilities		
10.1 Borrowing		
Unsecured loan		
- Interest free	3,677.76	-
Total	**3,677.76**	**-**
10.2 Trade Payables		
b) Total outstanding dues of creditors other than micro and small enterprises		
- related parties	67.43	-
- others	0.19	27.14
Total	**67.61**	**27.14**
10.3 Other financial liabilities		
Other payables	-	
- related parties	8,239.25	7,114.74
	8,239.25	**7,114.74**
Note 11 : Other current liabilities		
Statutory dues payable (including PF, TDS, GST & others)	1.70	0.02
Total	**1.70**	**0.02**

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2021

(Rs. in Millions)

	For the Year ended March 31, 2021	One month ended March 31, 2020
Note 12 : Other income		
Interest income on		
Interest income on bank deposits	-	-
Interest income from others	4,200.00	-
Gain on sale of investment	0.43	-
Gain/(loss) on fair value measurement of other payable	2.86	-
Fair value gain on investments	-	-
	4,203.30	**-**
Note 13 : Other expenses		
Rates & taxes	0.28	-
Legal and professional fees	4.96	-
Payment to auditor (refer note below)	0.56	0.24
Bank charges	0.02	0.00
Miscellaneous expenses	-	-
	5.83	**0.24**
Payment to auditor		
- Statutory audit fees	0.20	0.24
- Limited review fees	0.35	-
- Other services (certification fees)	0.00	-
Reimbursement of expenses	0.00	-
	0.56	**0.24**

Note 14 : Earnings per unit (EPU)

The following reflects the income and unit data used in the basic and diluted EPU computations:

(Rs. in Millions)

	For the year ended March 31, 2021	One month ended March 31, 2020
Profit attributable to unit holders of the Fund for basic & diluted earnings	4,151.21	(27.16)
Weighted average number of unit for basic & diluted EPU* (in Millions)	78,47,08,356	7,55,33,425
Basic earning per unit (Amount in Rs.)	5.29	(0.36)
Diluted earning per unit (Amount in Rs.)	5.29	(0.36)

Note 15 : Capital and other commitments

There are no capital and other commitments as at March 31, 2021

Note 16 :Contingent liabilities

There are no contingent liabilities as at March 31, 2021

Note 17 : Details of dues to micro and small enterprises as per MSMED Act, 2006

The following details regarding Micro and small Enterprises has been determined to the extent such parties has been identified on the basis of information available with the Fund.

(Rs. in Millions)

Particulars	As at March 31, 2021	As at March 31, 2020
Principal amount remaining unpaid to any supplier as at the period end	-	-
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

Note 18 : Operating segment

The Fund is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Fund’s activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

Note 19 : Related party transaction

I. List of Related Parties

i. Subsidiaries/ SPVs
AE Tollway Limited
CG Tollway Limited
Hapur Muradabad Tollway Limited
IRB Westcoast Tollway Limited
Kishangarh Gulabpura Tollway Limited
Kaithal Tollway Private Limited
Solapur Yedeshi Tollway Limited
Udaipur Tollway Limited
Yedeshi Aurangabad Tollway Limited

ii. Parties to the Fund *
IRB Infrastructure Developers Limited (Sponsor and Project Manager)
MMK Toll Road Private Limited (Investment Manager)
IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)

iii. Subsidiaries Company of Sponsor and Project Manager
Mhaiskar Infrastructure Private Limited
Modern Road Makers Private Limited
IRB Goa Tollway private Limited

 # As per Invit Regulation

iii. Promoters/ Directors of the parties to the Fund specified in (ii) above

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manage)**	**MMK Toll Road Private Limited (Investment Manager)**	IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Virendra D. Mhaiskar HUF	IRB Infrastructure Developers Limited	IDBI Bank Limited Life Insurance Corporation of India General Insurance Corporation of India
Directors	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Mukeshlal Gupta Mr. Sudhir Rao Hoshing	Virendra D Mhaiskar Boon Chin Hau	Mr. J. Samuel Joseph (w.e.f 26.11. 2019) Mr. Ravishankar G. Shinde Ms. Madhuri J. Kulkarni Mr.Satyajit Tripaty (w.e.f. 15.02.2020) Ms Padma Betai (w.e.f. 19.03.2020) Mr. G.M.Yadwalkar (till 30.10.2019) Mr. Swapan Kumar Bagchi (till 30.03.2020) Mr. Saurabh Chandra (till 21.05.2019) Ms. Sashikala Muralidharan (till 16.01. 2020)
	Independent directors	**Independent directors**	
	Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Mrs. Heena Raja	K G Krishnamurthy Ranjana Paranjape	

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2021

II) Related party transaction during the year

(Rs. in Millions)

Sr. No.	Particulars	Relation	Year ended March 31, 2021	Year ended March 31, 2020
1	**Equity Investment**		**1,205.00**	**19,180.01**
	AE Tollway Limited	Subsidiary	-	4,365.00
	CG Tollway Limited	Subsidiary	-	2,035.00
	Hapur Muradabad Tollway Limited	Subsidiary	1,205.00	1,895.00
	IRB Westcoast Tollway Limited	Subsidiary	-	1,741.91
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	1,555.00
	Kaithal Tollway Private Limited	Subsidiary	-	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	-	982.50
	Udaipur Tollway Limited	Subsidiary	-	1,168.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	2,157.60
2	**Subordinated debt**		**4,894.70**	**32,940.93**
	AE Tollway Limited	Subsidiary	-	4,365.00
	CG Tollway Limited	Subsidiary	270.00	2,217.50
	Hapur Muradabad Tollway Limited	Subsidiary	4,112.50	3,507.80
	IRB Westcoast Tollway Limited	Subsidiary	2.20	5,225.86
	Kishangarh Gulabpura Tollway Limited	Subsidiary	510.00	1,299.50
	Kaithal Tollway Private Limited	Subsidiary	-	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	-	2,947.50
	Udaipur Tollway Limited	Subsidiary	-	3,625.34
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	6,472.43
3	**Long term loan**		**48.71**	**30,205.57**
	AE Tollway Limited	Subsidiary	-	9,528.41
	IRB Westcoast Tollway Limited	Subsidiary	-	4,000.00
	Kaithal Tollway Private Limited	Subsidiary	48.71	8,677.16
	Solapur Yedeshi Tollway Limited	Subsidiary	-	4,000.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	4,000.00
4	**Short Term Loan given**		**1,770.28**	**29,829.67**
	AE Tollway Limited	Subsidiary	236.00	5,912.47
	IRB Hapur Muradabad Tollway Limited	Subsidiary	3.50	29.46
	IRB Westcoast Tollway Limited	Subsidiary	958.98	6,975.87
	Kaithal Tollway Limited	Subsidiary	151.00	1,134.45
	Solapur Yedeshi Tollway Limited	Subsidiary	20.00	1,476.20
	Udaipur Tollway Limited	Subsidiary	-	4,453.87
	CG Tollway Limited	Subsidiary	2.00	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	30.00	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	368.80	9,847.36
5	**Short Term Loan transferred to Sub debt**		**29,829.67**	**-**
	AE Tollway Limited	Subsidiary	5,900.88	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	29.46	-
	IRB Westcoast Tollway Limited	Subsidiary	6,975.87	-
	Kaithal Tollway Limited	Subsidiary	1,146.04	-
	Solapur Yedeshi Tollway Limited	Subsidiary	1,476.20	-
	Udaipur Tollway Limited	Subsidiary	4,453.87	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	9,847.36	-
6	**Unit Capital Issued**		**2,603.81**	**39,057.08**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	2,603.81	39,057.08
7	**Unsecured Loan / other payable repaid**		**5,106.67**	-
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	5,105.50	-
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project Manager	1.17	-

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2021

II) Related party transaction during the year

(Rs. in Millions)

Sr. No.	Particulars	Relation	Year ended March 31, 2021	Year ended March 31, 2020
8	**Other Receivable**		**53.51**	-
	Solapur Yedeshi Tollway Limited	Subsidiary	29.00	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	10.50	-
	IRB Westcoast Tollway Limited	Subsidiary	13.92	-
	Udaipur Tollway Limited	Subsidiary	0.09	-
9	**Unsecured Loan Payable**		**3,677.76**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	3,677.76	-
10	**Other Payable**		**2,492.85**	**35,573.69**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	2,444.14	32,037.96
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project Manager	48.71	205.57
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project Manager	-	1,785.30
	IRB Goa Tollway Private Limited	Subsidiaries Company of Sponsor and Project Manager	-	1,544.86

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2021

III) Related party outstanding balances

(Rs. in Millions)

Sr. No.	Particulars	Relation	As on March 31,2021	As on March 31,2020
1	**Equity Investment**		**20,385.01**	**19,180.01**
	AE Tollway Limited	Subsidiary	4,365.00	4,365.00
	CG Tollway Limited	Subsidiary	2,035.00	2,035.00
	Hapur Muradabad Tollway Limited	Subsidiary	3,100.00	1,895.00
	IRB Westcoast Tollway Limited	Subsidiary	1,741.91	1,741.91
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,555.00	1,555.00
	Kaithal Tollway Private Limited	Subsidiary	3,280.00	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	982.50	982.50
	Udaipur Tollway Limited	Subsidiary	1,168.00	1,168.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	2,157.60	2,157.60
2	**Subordinated debt**		**67,665.30**	**32,940.93**
	AE Tollway Limited	Subsidiary	10,265.88	4,365.00
	CG Tollway Limited	Subsidiary	2,487.50	2,217.50
	Hapur Muradabad Tollway Limited	Subsidiary	7,649.76	3,507.80
	IRB Westcoast Tollway Limited	Subsidiary	12,203.92	5,225.86
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,809.50	1,299.50
	Kaithal Tollway Private Limited	Subsidiary	4,426.04	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	4,423.70	2,947.50
	Udaipur Tollway Limited	Subsidiary	8,079.21	3,625.34
	Yedeshi Aurangabad Tollway Limited	Subsidiary	16,319.79	6,472.43
3	**Long term loan**		**30,254.28**	**30,205.57**
	AE Tollway Limited	Subsidiary	9,528.41	9,528.41
	IRB Westcoast Tollway Limited	Subsidiary	4,000.00	4,000.00
	Kaithal Tollway Private Limited	Subsidiary	8,725.87	8,677.16
	Solapur Yedeshi Tollway Limited	Subsidiary	4,000.00	4,000.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	4,000.00	4,000.00
4	**Short Term Loan**		**1,810.28**	**29,829.67**
	AE Tollway Limited	Subsidiary	247.59	5,912.47
	IRB Hapur Muradabad Tollway Limited	Subsidiary	3.50	29.46
	IRB Westcoast Tollway Limited	Subsidiary	958.98	6,975.87
	Kaithal Tollway Limited	Subsidiary	179.41	1,134.45
	Solapur Yedeshi Tollway Limited	Subsidiary	20.00	1,476.20
	Udaipur Tollway Limited	Subsidiary	-	4,453.87
	Yedeshi Aurangabad Tollway Limited	Subsidiary	368.80	9,847.36
	CG Tollway Limited	Subsidiary	2.00	
	Kishangarh Gulabpura Tollway Limited	Subsidiary	30.00	-
5	**Other Payable**		**32,957.00**	**35,573.69**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	29,373.73	32,037.96
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project	254.28	205.57
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project	1,784.13	1,785.30
	IRB Goa Tollway private Limited	Subsidiaries Company of Sponsor and Project Manager	1,544.86	1,544.86
6	**Other Receivable**		**53.51**	-
	Solapur Yedeshi Tollway Limited	Subsidiary	29.00	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	10.50	-
	IRB Westcoast Tollway Limited	Subsidiary	13.92	-
	Udaipur Tollway Limited	Subsidiary	0.09	-
7	**Unsecured Loan / other payable**		**3,677.76**	-
	IRB Infrastructure Developers Limited	Subsidiaries Company of Sponsor and Project Manager	3,677.76	-

Note 20 : Fair Values

Financial assets and liabilities

The carrying values of financials instruments of the Fund are reasonable and approximations of fair values.

The accounting classification of each category of financial instruments, their carrying amounts and the categories of financial assets and liabilities measured at fair value, are set out below:

(Rs. in Millions)

	Carrying amount	Fair Value	Carrying amount	Fair Value
	As at March 31, 2021	**As at March 31, 2021**	**As at March 31, 2020**	**As at March 31, 2020**
Financial assets				
Financial assets measured at amortised cost				
Loans	32,064.56	32,064.56	60,035.24	60,035.24
Other financial assets	2,234.78	2,234.78	-	-
Financial assets measured at fair value through statement of Profit & Loss				
Investments in mutual funds	50.00	50.00	-	-
Financial assets measured at amortised cost				
Cash and cash equivalents	12.65	12.65	0.01	0.01
Other Bank balances	-	-	-	-
Financial liabilities				
Trade payables	67.61	67.61	27.14	27.14
Other financial liabilities	32,957.00	32,957.00	35,573.69	35,573.69

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the company has determined that market participants would take into account when pricing the investments.

Note 21 : Financial risk management objectives and policies

The fund's risk management policies are established to identify and analyse the risks faced by the fund, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the fund's activities.

The Board of Directors of Investment Manager have overall responsibility for the establishment and oversight of the fund's risk management framework.

In performing its operating, investing and financing activities, the fund is exposed to the Credit risk, Liquidity risk and Market risk.

a. Market Risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits.

Credit risk

Credit risk is the risk that a counter party will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Fund is exposed to credit risk from its investing activities including loans to subsidiaries, deposits with banks and other financial instruments. As at March 31, 2021, the credit risk is considered low since substantial transactions of the Fund are with its subsidiaries.

Interest Rate Risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The fund's exposure to the risk of changes in market interest rates relates primarily to the fund's long-term debt obligations with floating interest rates.

c. Liquidity risk

Liquidity risk is the risk that the Fund may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Fund's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements.

The Fund closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt and overdraft from banks at an optimised cost.

The liquidity risk is managed on the basis of expected maturity dates of the financial liabilities. The average credit period taken to settle trade payables is about 30 to 90 days. The other payables are with short-term durations. The carrying amounts are assumed to be a reasonable approximation of fair value. The following table analyses financial liabilities by remaining contractual maturities:

(Rs. in Millions)

March 31, 2021	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Borrowings	-		3,677.76		-	**3,677.76**
Other financial liabilities			8,239.25	24,717.75		**32,957.00**
Trade payables	-	67.61	-	-	-	**67.61**
Total	**-**	**67.61**	**11,917.01**	**24,717.75**	**-**	**36,702.38**

March 31, 2020	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Other financial liabilities			7,114.74	28,458.95		**35,573.69**
Trade payables	-	27.14	-	-	-	**27.14**
Total	**-**	**27.14**	**7,114.74**	**28,458.95**	**-**	**35,600.83**

At present, the fund does expects to repay all liabilities at their contractual maturity. In order to meet such cash commitments, the operating activity is expected to generate sufficient cash inflows.

Note 22 : Capital management

Capital includes equity attributable to the equity holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise shareholder value. The company manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the company may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the year ended March 31, 2021

The company monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

(Rs. in Millions)

	As at March 31, 2021	As at March 31, 2020
Trade and other payables	67.61	27.14
Borrowings	3,677.76	-
Other financial liabilities	32,957.00	35,573.69
Less: cash and cash equivalents (including unpaid dividend account)	(12.65)	(0.01)
Net debt (A)	**36,689.73**	**35,600.82**
Unit capital	81,688.00	76,582.50
Total equity (B)	**81,688.00**	**76,582.50**
Capital and net debt C = A + B	**1,18,377.73**	**1,12,183.32**
Gearing ratio (%) (C / A)	**30.99%**	**31.73%**

In order to achieve this overall objective, the fund's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period.

Note 23 : Significant accounting judgement, estimates and assumptions

The preparation of the Fund's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities and the accompanying disclosures and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in out comes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Judgement

In the process of applying the Fund’s accounting policies, management has made the following judgements, which have the most significant effect on the amounts recognised in the financial statements.

Classification of unit holders Funds

Under the provisions of the InvIT Regulations, Fund is required to distribute to Unit holders not less than ninety percent of the net distributable cash flows of Fund for each financial year. Accordingly, a portion of the unit holders’ Funds contains a contractual obligation of the Fund to pay to its Unit holders cash distributions. The Unit holder's Funds could therefore have been classified as compound financial instrument which contain both equity and liability components in accordance with Ind AS 32-Financial Instruments: Presentation.
However, in accordance with SEBI Circulars(No.CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No.CIR/IMD/DF/127/2016 dated 29-Nov-2016) issued under the InvIT Regulations, the unit holders’ Funds have been classified as equity in order to comply with the mandatory requirements of Section H of Annexure A to the SEBI Circular dated 20-Oct-2016 dealing with the minimum disclosures for key financial statements. In line with the above, the income distribution payable to unit holders is recognized as liability when the same is approved by the Investment Manager.

Estimates and assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities or fair value disclosures within the next financial year, are described below. The Fund based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Fund. Such charges are reflected in the assumptions when they occur.

Impairment of non-financial assets

Non-financial assets of the Fund primarily comprise of investments in subsidiaries, Impairment exists when the carrying value of an asset or cash generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The recordable amounts for the investments in subsidiaries are based on value in use of the underlying projects. The value in use calculation is based on a DCF model. The cash flows are derived from budgets / forecasts over the life of the projects.

IRB Infrastructure Trust

Notes to financial statement for the year ended March 31, 2021

Note 24 : COVID 19

The outbreak of Coronavirus (COVID-19) pandemic globally and in India is causing significant disturbance and slowdown of economic activity. As per the directions of the Ministry of Road Transport & Highways (MoRTH)/ National Highway Authority of India (NHAI), in order to follow MHA guidelines about commercial and private establishment in the wake of COVID-19 epidemic in the country, operations at the toll plaza of the Group were closed down w.e.f. 26th March, 2020. The toll operations were resumed from 20th April, 2020 by ensuring compliance with preventive measures in terms of guidelines/ instructions issue by Govt. of India to contain spread of Covid -19. Due to this, traffic for the toll road has been impacted. Management believes this is temporary and expects traffic will be normalised looking at the recent toll collection. In accordance with the Concession Agreement and NHAI policy no. 8.3.33/2020 and 8.4.20/2020 dated 26th May, 2020, the Group is eligible for extension of concession period with NHAI towards loss of revenue due to COVID-19 pandemic and NHAI is also extending COVID-19 loan to the Concessionaire for shortfall in cashflow.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Chinmaya Deval
Partner
Membership No.: 148652

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Finance officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date : 24/05/2021

Place: Mumbai
Date : 24/05/2021

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Investors should read the following discussion and analysis of the Trust's financial condition and results of operations together with the sections "Summary Financial Statements" and "Financial Statements" on pages 43 and 333, respectively. This discussion contains forward-looking statements and involves numerous risks and uncertainties, including, but not limited to, those described in the section "Risk Factors" on page 17. Actual results could differ materially from those contained in any forward-looking statements and for further details regarding forward-looking statements, refer to "Forward-Looking Statements" on page 15.

This Letter of Offer includes (i) unaudited condensed interim consolidated financial statements of the Trust and the Project SPVs as of and for the nine-month period ended December 31, 2023; (ii) audited consolidated financial statements of the Trust and the Project SPVs as of and for the Financial Years 2023, 2022 and 2021; (iii) unaudited condensed interim standalone financial statements of the Trust as of and for the nine-month period ended December 31, 2023; and (iv) audited standalone financial statements of the Trust as of and for the Financial Years 2023, 2022 and 2021.

IRB LTPL was incorporated on November 10, 2023 and the Consolidated Financial Statements includes information for IRB LTPL since its incorporation. IRB KTPL and IRB GTPL were incorporated on January 1, 2024, i.e., after December 31, 2023. Accordingly, the Consolidated Financial Statements does not include information for IRB KTPL and IRB GTPL. Given that IRB KTPL and IRB GTPL were incorporated on the above date and have not undertaken any operations, (i) pro forma financial statements of the Trust, IRB KTPL and IRB GTPL has not been prepared; (ii) audited financial statements of IRB KTPL and IRB GTPL for the period from January 1, 2024 until the date of this Letter of Offer is not meaningful and is not included in this Letter of Offer; and (iii) summary financial statements of IRB KTPL and IRB GTPL for the above period is not meaningful and is not included in this Letter of Offer. For further information, see "Financial Statements" on page 333.

The following discussion includes a discussion and analysis of the financial condition and results of operations of the Trust and the Project SPVs on a consolidated basis as of and for the nine-month period ended December 31, 2023, based on the independent auditors' review report on unaudited condensed interim financial statements of IRB Infrastructure Trust issued by the auditors for such period, and the Financial Years ended March 31, 2023, March 31, 2022 and March 31, 2021, based on the audited consolidated financial statements of the Trust for such periods. Ind AS differs in certain material respects from Indian GAAP, IFRS and U.S. GAAP. Accordingly, the degree to which our financial statements will provide meaningful information to a prospective investor in countries other than India is entirely dependent on the reader's level of familiarity with Ind AS.

The Project SPVs' financial year ends on March 31 of each year. Accordingly, all references to a particular financial year are to the 12-month period ended March 31 of such year.

Overview

The Trust is a registered infrastructure investment trust under the InvIT Regulations. The Portfolio of the Trust comprises 12 toll-road assets in the states of Telangana, West Bengal, Haryana, Uttar Pradesh, Rajasthan, Gujarat, Goa, Maharashtra and Karnataka in India. Three of the other Project SPVs held by the Trust have also entered into concession agreements with the NHAI for the operation of toll road assets and are awaiting the receipt of the appointed date for their projects. These toll roads are operated and maintained pursuant to concessions awarded by the NHAI and other state concessioning authorities.

The Trust has acquired the Portfolio comprised of the Project SPVs from the Sponsor and in the case of PDTPL, IRB GEPL and STPL, holds the Project SPV together with the Sponsor. IRB LTPL, IRB KTPL and IRB GTPL were incorporated by and are held by the Trust. Each of the Project SPVs is an eligible infrastructure project as defined under the InvIT Regulations. As of December 31, 2023, the Project SPVs owned the following toll road assets comprising approximately 8,000 Lane Kilometers of highway:

- The Agra - Etawah NH-2 Project: A 124.52 km section of NH-2 between Agra and Etawah Bypass in Uttar Pradesh which is held by AETL;
- The Gulabpura - Chittorgarh NH-79 Project: A 124.87 km section of NH-79 between Gulabpura and Chittorgarh Bypass in Rajasthan which is held by CGTL;

- The Hapur - Moradabad NH-9 Project: A 99.867 km section of NH-9 between Hapur and Moradabad in Uttar Pradesh which is held by IRB HMTL;

- The Goa - Kundapur NH-17 Project: A 187.28 km section of NH-17 between Goa/Karnataka border and Kundapur in Karnataka which is held by IRB WTL;

- The Kishangarh - Gulabpura NH-79/79A Project: A 90.00 km section of NH-79/79A between Kishangarh and Gulabpura in Rajasthan which is held by KGTL;

- The Kaithal - Rajasthan Border NH-152/65 Project: A 166.259 km section of NH-152/65 between Kaithal and Rajasthan Border in Haryana which is held by KTL;

- The Solapur - Yedeshi NH-211 Project: A 98.717 km section of NH-211 between Solapur and Yedeshi in Maharashtra which is held by SYTL;

- The Udaipur - Rajasthan Border NH-8 Project: A 113.80 km section of NH-8 between Udaipur and Rajasthan Border in Rajasthan and Gujarat which is held by UTL;

- The Yedeshi - Aurangabad NH-211 Project: A 189.09 km section of NH-211 between Yedeshi and Aurangabad in Maharashtra which is held by YATL;

- The Palsit – Dankuni NH-19 Project: A 63.83 km section of NH-19 between Palsit and Dankuni in West Bengal which is held by PDTPL;

- The Nehru Outer Ring Road Project: A 158.00 km section of the Nehru Outer Ring Road in Telangana which is held by IRB GEPL; and

- The Samakhiyali – Santalpur NH-27 Project: A 90.90 km section of NH-27 between Samakhiyali and Santalpur in Gujarat which is held by STPL.

Further, as of the date of this Letter of Offer, certain Project SPVs have entered into concession agreements with the NHAI for the operation of the following toll-road assets:

- The Lalitpur – Lakhnadon NH-44 Project: A 316.08 km section of NH-44 between Lalitpur, Sagar and Lakhnadon in Uttar Pradesh and Madhya Pradesh which will be held by IRB LTPL; and

- The Kota Bypass and Cable Stay Bridge Project: A section of 27.820 km of NH-76 in Rajasthan which will be held by IRB KTPL.

- The Gwalior - Jhansi Project: An 82.455 km section of NH-75 (new NH-44) between Gwalior and Jhansi in the states of Madhya Pradesh and Uttar Pradesh which will be held by IRB GTPL.

The map set out below depicts the location of the Portfolio:

The Sponsor of the Trust is IRB Infrastructure Developers Limited, one of the largest infrastructure development and construction companies in India in terms of net worth in the roads and highways sector according to the NHAI's annual prequalification for public private partnerships in national highway projects report for 2016. The Sponsor has been listed on the Stock Exchanges since 2008. As at December 31, 2023, the Sponsor had six road projects of which two were operational and four were under-construction. The Sponsor also acts as the Project Manager. For further details, see "*The Sponsor and Project Manager*" on page 313.

The Investment Manager of the Trust is MMK Toll Road Private Limited. The Investment Manager has experience in operating a road project for a period of 13 years. 51% of the equity share capital in the Investment Manager is held by the Sponsor and 49% of the equity share capital of the Investment Manager is held by Croxley. Upon the completion of the Cintra Transaction, the Cintra IM Investor is expected to hold 24% of the equity share capital of the Investment Manager. For further details, see "*The Investment Manager*" and "*Corporate Governance*" on pages 317 and 159, respectively.

The Trustee of the Trust is IDBI Trusteeship Services Limited. The Trustee is registered with the SEBI as a debenture trustee under the Debenture Trustees Regulations. For further details, see "*The Trustee*" on page 325.

Factors affecting Results of Operations

Our business and results of operations have been affected and will continue to be affected in future by a number of important factors, including:

The terms of the concession agreements and traffic volumes

BOT, TOT and DBFOT projects restrict the Project SPVs' operational and financial flexibility. Toll fees are typically pre-determined with the relevant government entity and cannot be modified to reflect prevailing circumstances, other than annual adjustments to account for inflation as specified in the concession agreements. Accordingly, a Project SPV's profitability is largely a function of how effectively it manages costs during the concession period. Significant costs during the concession period include construction costs and operating and maintenance expenses such as periodic maintenance, which is required to be performed as specified in the concession agreement. Periodic maintenance involves the repair of wear and tear of the roads and highways, including overlaying the surface of the roads and highways, if required. The Project Manager has agreed to provide the remaining portion of construction works for the Project SPVs. The Project Manager has also agreed to provide for operations and maintenance works for the Project SPVs for an initial period of 10 years on a fixed-fee basis.

The Project SPVs are substantially dependent on the accuracy of the traffic volume forecasts for their respective projects. Projects undertaken on a BOT, TOT or DBFOT basis involve concession agreements that are long-term in nature, usually between 15 to 30 years. The agreed consideration for each of the Project SPVs' projects was based on forecasts of traffic volumes and expected revenues over the concession period. For projects expanding roads from four-to-six lanes, tolling typically starts from day one of the concession period at a rate of 75% and continues until the completion of construction, upon which tolling is reset to 100%. For other projects, including greenfield construction, tolling generally starts once construction is completed and COD is achieved. Any material shortfall between the actual traffic volume and the forecast traffic volume or revenue for a project could have a material adverse effect on their cash flows, results of operations and financial condition.

The Project SPVs' projects involve agreements that are long-term in nature. All long-term projects have inherent risks associated with them and involve variables that may not necessarily be within the Project SPVs' control. Accordingly, we may be exposed to a variety of construction, operation and maintenance and other risks, including unanticipated cost increases and overruns, inability to negotiate satisfactory arrangements with service providers and disagreements with service providers. In addition, the long-term nature of the Project SPVs' contracts may expose them to increased risk of unforeseen business and industry changes and developments which could have a material adverse effect on their business, financial condition and results of operations.

General economic and political conditions in India and the level of investment and activity in the infrastructure development sector

The Project SPVs derive their revenue from their toll-road operations. Demand for toll roads is primarily dependent on sustained economic development in the regions that they operate in and government policies relating to infrastructure development. It is also significantly dependent on budgetary allocations made by the Government of India and the State Governments for the roads and highways sector, as well as funding provided by international and multilateral development finance institutions for infrastructure projects. Investment by the private sector in infrastructure projects is dependent on the potential returns from such projects and is, therefore, linked to Government and State Government policies relating to private sector participation and sharing of risks and returns from such projects.

We believe that the Government's and State Governments' focus on, and sustained increases in budgetary allocation for, infrastructure, and the development of comprehensive infrastructure policies that encourage greater private sector participation and funding for infrastructure projects should further result in large infrastructure projects in India. We believe that we are likely to benefit from the Government and State Governments making infrastructure development a policy priority, which may lead to corresponding significant investment in the roads and highways sector. Since the Project SPVs focus on the roads and highways sector, macroeconomic factors in India relating to this sector will have a significant impact on their prospects and results of operations. As the roads and highways sector is driven by increases in agriculture and manufacturing, any slowdown or perceived slowdown in the Indian economy, or in specific sectors of the Indian economy, could materially and adversely impact the Project SPVs' business and financial performance.

The Project SPVs may be unable to collect tolls due to political protests or other agitations relating to tolling. For instance, due to a protest against certain agricultural laws in India, tolling for the Kaithal – Rajasthan project operated by KTL was halted from December 5, 2020 and resumed on December 16, 2021. The Project SPV has informed NHAI of this event and expects to receive compensation under the *force majeure* clause of the relevant Concession Agreement, which provides for the receipt of 50% of the O&M and interest costs as reimbursement in cash and an extension in concession period to compensate for revenue loss during the toll suspension period.

Further, in relation to COVID-19, the NHAI has offered an extension of concession period by three to six months to compensate for reduced revenue due to the COVID-19 lockdown. Certain Project SPVs have applied to the NHAI for appropriate relief (including extension of the concession period) and compensation as per the respective concession agreements for the time period during which the relevant projects have been impacted by COVID-19.

Competition

The Trust and the Project SPVs operate in a competitive environment. The competition for toll road and other infrastructure projects varies depending on the size, nature and complexity of the project and on the geographical region in which the project is to be executed. Some of their competitors may have greater financial resources, economies of scale and operating efficiencies than the Trust or the Project SPVs do. There can be no assurance that they can effectively compete with their competitors in the future, and this failure to compete effectively may have a material adverse effect on the Trust's financial condition and results of operations.

Significant Accounting Policies

The preparation of financial statements in conformity with Ind AS, applicable accounting standards and the Companies Act, 2013 requires our management to make judgments, estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the results of operations during the reporting period end. By their nature, these judgments are subject to a degree of uncertainty. Although these estimates are based upon management's best knowledge of current events and actions, actual results could differ from these estimates.

While all aspects of the Project SPVs Consolidated Financial Statements should be read and understood in assessing their current and expected financial condition and results, we believe that the following critical accounting policies warrant particular attention:

Intangible assets

As permitted under Ind AS, the group has elected to continue with the carrying value of its toll collection rights (which form part of its intangible assets), as recognised in the financial statements as at the date of transition to Ind AS and measured as per the previous GAAP.

Intangible assets acquired separately are measured on initial recognition at cost. Following initial recognition, intangible assets are carried at cost less any accumulated amortisation and accumulated impairment losses. Internally generated intangibles, excluding capitalised development costs, are not capitalised and the related expenditure is reflected in statement of profit or loss in the period in which the expenditure is incurred.

Toll Collection Rights

Toll collection rights are stated at cost, net of accumulated amortisation and impairment losses. Cost includes toll collection rights awarded by the grantor against construction service rendered by the Project SPV on a DBFOT basis - direct and indirect expenses on construction of roads, bridges, culverts, infrastructure and other assets at the toll plazas.

Toll collection rights are amortised over the period of the concession, using revenue based amortisation as prescribed under Ind AS 38. Under this method, the carrying value of the rights is amortised in the proportion of actual toll revenue for the year to projected revenue for the balance toll period, to reflect the pattern in which the asset's economic benefits will be consumed. At each balance sheet date, the projected revenue for the balance toll period is reviewed by the management. If there is any change in the projected revenue from previous estimates, the amortisation of toll collection rights is changed prospectively to reflect any changes in the estimates.

Intangible assets are assessed for impairment whenever there is an indication that the intangible asset may be impaired.

Amortisation of toll equipments

Toll equipments are amortized on a straight line basis over the estimated useful economic life not exceeding seven years.

Provisions

Provisions are recognised when the Project SPVs have present obligation (legal or constructive) as a result of a past event, and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Project SPV expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of profit and loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimates.

Principal components of Income and Expenses

Income

Our total income comprises (i) revenue from operations and (ii) other income.

Revenue from operations

Revenue from operations comprises (i) contract revenue (road construction); (ii) income arising out of toll collection (net); (iii) adjustments due to revenue share to NHAI on account of Fastag; and (iv) other operating revenue.

During the construction period of a project, the NHAI may ask the Project SPVs to carry out utility shifting work (which is incidental to the construction of the toll road and typically involves the shifting of utilities that are located at the construction site) or may award the Project SPVs additional scope of work, which is separately paid by the NHAI. Revenue from such utility shifting or change in scope contract, among others, also forms part of the Project SPVs' contract revenue. Note that contract revenue is typically incurred during the initial construction period of a project and is not recurring in nature.

The following table provides a breakdown of revenue from operations for the periods indicated:

Revenue from Operations	Nine-month period ended December 31, 2023		Nine-month period ended December 31, 2022		Financial Year 2023		Financial Year 2022		Financial Year 2021	
	Amount (in ₹ million)	*% of Total Revenue from Operations*	*Amount (in ₹ million)*	*% of Total Revenue from Operations*	*Amount (in ₹ million)*	*% of Total Revenue from Operations*	*Amount (in ₹ million)*	*% of Total Revenue from Operations*	*Amount (in ₹ million)*	*% of Total Revenue from Operations*
Contract revenue (road construction)	12,668.24	47.74	8,444.95	42.44	1 1,672.04	43.37	1,054.48	8.50	1,863.70	17.99
Income arising out of toll collection (net)	13,979.20	52.68	11,597.34	58.29	15, 425.76	57.32	10,598.07	85.43	8,549.77	82.51
Revenue share to NHAI - FASTag	(112.08)	(0.42)	(145.85)	(0.73)	(185.44)	(0.69)	(212.87)	(1.72)	(51.97)	(0.50)
Other operating revenue	-	-	0.23	0.00	0.23	0.00	965.16	7.78	-	-
Total	**26,535.36**	**100.00**	**19,896.67**	**100.00**	**26,912.59**	**100.00**	**12,404.84**	**100.00**	**10,361.51**	**100.00**

Note: The information for the nine-month periods ended December 31, 2023 and December 31, 2022 is based on the independent auditors' review report on unaudited condense consolidated interim financial statements of IRB Infrastructure Trust and has been presented in this table together with the audited financial statements for the Financial Years 2023, 2022 and 2021 for presentation purposes only.

Other income

The key components of other income are interest income on bank deposits, profit on sale of investments, fair value gain on mutual funds and other non-operating income.

The following table provides a breakdown of other income for the periods indicated:

Other income	Nine-month period ended December 31, 2023	Nine-month period ended December 31, 2022	Financial Year 2023	Financial Year 2022	Financial Year 2021
	Amount (in ₹ million)				
Interest income on					
- Bank deposits	367.14	104.16	178.88	73.64	74.46
- Others	1.60	6.37	7.17	8.05	7.59
Profit on sale of investments	77.82	42.12	62.95	13.93	13.08
Fair value gain on mutual funds	66.87	7.32	11.35	0.78	1.43
Other non-operating income	14.42	1.35	2.73	3.73	13.28
Gain/(loss) on fair value measurement of other payable	-	-	-	-	2.86
Total	**527.86**	**161.32**	**263.08**	**100.13**	**112.71**

Note: The information for the nine-month periods ended December 31, 2023 and December 31, 2022 is based on the independent auditors' report on unaudited condensed consolidated interim financial statements of IRB Infrastructure Trust and has been presented in this table together with the audited financial statements for the Financial Years 2023, 2022 and 2021 for presentation purposes only.

Expenses

Our expenses primarily consist of the following:

- valuation expenses, which comprise payments towards valuation to be carried out for trust;
- audit fees, which includes statutory audit fees and limited review fees;
- operating expenses, which are road work and site expenses, comprising contract expenses in relation to utility shifting or change in scope contracts, site and other direct expenses, sub-contracting/security expenses and technical consultancy and supervision charges;
- project management fees, which comprises payments for operation and maintenance of road;
- insurance and security expenses, which comprise payment towards insurance coverage for Trust and Project SPVs;
- trustee fees, which comprise payment to Trustee;
- depreciation on property, plant and equipment;
- amortisation of intangible assets;
- finance costs, which primarily comprise interest expenses on loans availed from banks/financial institutions, debentures and other borrowing costs which include amortisation of transaction costs and unwinding of discount on provision of MMR;
- legal and professional fees

- Investment Manager fees;
- custodian fees;
- loss on sale of assets;
- fair value loss on measurement of other payable; and
- other expenses, which comprise various administration costs such as power and fuel costs, rent, rates and taxes, water charges, repair and maintanance, travel and conveyance expenses, vehicle expenses, printing and stationery expenses, membership and subscription, advertisement expenses, sitting fees for directors, corporate social responsiblities expenditures, bank charges and other miscellaneous expenses.

Results of Operations

The financial statements for the nine-month periods ended December 31, 2023 and December 31, 2022 and the Financial Years 2023, 2022 and 2021 has been prepared on a consolidated basis. The Consolidated Financial Statements has been prepared in accordance with Ind AS and the provisions of the InvIT Regulations.

Consolidated Financial Statements

This section discusses our results of operations for the nine-month periods ended December 31, 2023 and December 31, 2022 and the Financial Years 2023, 2022 and 2021 on the basis of our Consolidated Financial Statements.

The historical results presented below are not necessarily indicative of the results that may be expected for any future period. For additional information, see "*Financial Statements*" on page 333.

Nine-month period ended December 31, 2023 and nine-month period ended December 31, 2022

The table below sets forth certain data from the Consolidated Financial Statements for the nine-month period ended December 31, 2023 and the nine-month period ended December 31, 2022.

Particulars	Nine months ended December 31, 2023	Nine months ended December 31, 2022
	Amount (in ₹ million)	*Amount (in ₹ million)*
Income		
Revenue from operations	26,535.36	19,896.67
Other income	527.86	161.32
Total income	**27,063.22**	**20,057.99**
Expenses		
Valuation Expenses	2.29	0.97
Audit Fees	3.68	3.85
Operating Expenses	13,201.29	9,305.29
Project Management Fees	2,931.62	1,997.38
Insurance and Security Expenses	66.74	8.13
Trustee Fees	4.54	3.33
Depreciation on Property plant and Equipment	0.72	0.95
Amortisation of Intangible Assets	2,614.32	1,957.61
Finance costs (Interest)	9,531.37	6,698.66
Finance costs (Others)	814.76	990.24
Legal & Professional Fees	239.81	136.14
Investment Manager Fees	122.60	42.39
Custodian fees	1.10	0.24
Loss on sale of assets	-	-

Particulars	Nine months ended December 31, 2023	Nine months ended December 31, 2022
	Amount (in ₹ million)	*Amount (in ₹ million)*
Fair value loss on measurement of other payable	1,676.37	356.63
Other expenses	63.25	86.20
Total expenses	**31,274.46**	**21,588.00**
Profit/(loss) before tax	**(4,211.24)**	**(1,530.02)**
Tax expenses		
Current tax	(75.08)	351.25
Deferred tax	(289.36)	(445.56)
MAT Credit utilisation / (Entitlement)		
Total tax expenses	**(364.44)**	**(94.30)**
Profit/(loss) after tax	**(3,846.80)**	**(1,435.72)**
Other comprehensive income		
Item that will not be reclassified to profit or loss: (a) re-measurement (loss)/gain on defined benefit plans (net of taxes)	-	-
Other comprehensive (loss) for the period, net of tax	-	-
Total comprehensive income for the period	**(3,846.80)**	**(1,435.72)**

Total income

The total income of the Project SPVs increased to ₹27,063.22 million during the nine-month period ended December 31, 2023 from ₹20,057.99 million in nine-month period ended December 31, 2022. This increase in total income was primarily due to ₹6,638.69 million (or 33.37%) increase in revenue from operations.

Revenue from operations

The revenue from operations of the Project SPVs increased to ₹26,535.36 million during the nine-month period ended December 31, 2023 from ₹19,896.67 million in nine-month period ended December 31, 2022, primarily due to increase in toll collection upon issuance of completion certificates and tariff revision for projects achieving provisional commercial operation date and the acquisition of IRB GEPL in August 2023.

The contract revenue (road construction) increased to ₹12,668.24 million during the nine-month period ended December 31, 2023, from ₹8,444.95 million in nine-month period ended December 31, 2022 due to higher utility shifting income and initial upgradation work of IRB GEPL. The income arising out of toll collection (net) increased to ₹13,979.20 million during the nine-month period ended December 31, 2023 from ₹11,597.34 million during the nine months ended December 31, 2022 primarily due to receipt of (a) completion certificates for IRB HMTL and KGTL in July 2022, provisional commercial operations date in March 2023 for IRB WTL and completion certificate for IRB HMTL in April 2023 as a result of which these projects received tariff hikes; and (b) the acquisition of IRB GEPL in August 2023.

Other income

The other income of the Project SPVs increased to ₹527.86 million during the nine-month period ended December 31, 2023 from ₹161.32 million in nine-month period ended December 31, 2022. This increase was primarily due to an increase in interest income on bank deposits upon creation of debt service reserve accounts by KGTL, IRB WTL, KTL, AETL, IRB HMTL and the Trust. The fair value gain on mutual funds also increased to ₹66.87 million from ₹7.32 million during nine-month ended December 31, 2023 from December 31, 2022.

Total expenses

The total expenses increased to ₹31,274.46 million during the nine-month period ended December 31, 2023 from ₹21,588.00 million during nine-month period ended December 31, 2022. This increase was primarily due to increase in operating expenses, project management fees, amortisation of intangible assets, finance costs (interest), investment manager fees and fair value loss on measurement of other payable.

Operating expenses

Operating expenses increased to ₹13,201.29 million during the nine-month period ended December 31, 2023 from ₹9,305.29 million during the nine-month period ended December 31, 2022, primarily due to increase in contract expenses. Contract expenses increased from ₹8,188.85 million during nine-month period ended December 31, 2022 to ₹12,182.40 million in nine-month period ended December 31, 2023. Contract expenses primarily increased due to initial upgradation work of IRB GEPL. This increase in contract expenses was partially set-off by decrease in operation and maintenance expenses from ₹1,071.82 million in nine-month period ended December 31, 2022 to ₹933.44 million in nine-month period ended December 31, 2023. The site and other direct expenses increased to ₹46.72 million from nil and technical consultancy and supervision charges decreased from ₹44.26 million to ₹33.92 million during nine-month period ended December 31, 2022 to nine-month period ended December 31, 2023.

Project management fees

Project management fees increased to ₹2,931.62 million during the nine-month period ended December 31, 2023, from ₹1,997.38 million during the nine-month ended December 31, 2022, primarily due to the addition of IRB GEPL in Portfolio.

Amortisation of Intangible Assets

Amortization expenses are directly proportionate to toll revenue. Amortisation of intangible assets increased to ₹2,614.32 million during the nine-month period ended December 31, 2023, from ₹1,957.61 million during the nine-month period ended December 31, 2022, primarily attributable to increase in toll collection upon issuance of completion certificates for IRB HMTL and KGTL on July 2022, and the receipt of commercial operations dates for additional stretches in case of IRB WTL and IRB HMTL, which lead to a hike in tariff for these projects. Also, a new project, IRB GEPL, was added to the Portfolio.

Finance costs (interest)

Finance costs (interest) increased to ₹9,531.37 million during the nine-month period ended December 31, 2023 from ₹6,698.66 million during the nine-month ended December 31, 2022, primarily due to increase in loans from banks and financial institutions to ₹7,465.84 million from ₹5,794.26 million and increase in and debentures to ₹2,065.53 from ₹904.40 million. These are primarily due to increase in additional loan taken by the Trust and addition of IRB GEPL in the Portfolio.

Finance costs (others)

Finance costs (others) were ₹814.76 million in the nine-month period ended December 31, 2023 as against ₹990.24 million during the nine-month period ended December 31, 2022. This is primarily due to decrease in interest unwinding of trade payable – associates to ₹187.67 during the nine-month period ended December 31, 2023 from ₹610.50 million in the nine-month period ended December 31, 2022, partly offset by increase in amortisation of transaction cost and unwinding of discount on provision of MMR during such period.

Investment Manager Fees

Investment Manager fees increased from ₹42.39 million to ₹122.60 million from the nine-month period ended December 31, 2022 to the nine-month period ended December 31, 2023.

Fair value loss on measurement of other payable

Fair value loss on measurement of other payable increased to ₹1,676.37 million during the nine-month period ended December 31, 2023 from ₹356.63 million during the nine-month ended December 31, 2022. During the nine-month ended December 31, 2023, the Trust Group had filed claims in relation to a project with the NHAI. On actualization of claims in fair valuation working, there was a fair value loss of ₹1,676.37 million. The said loss is non-cash in nature.

Profit/(loss) before tax

As a result of the factors discussed above, the loss before tax increased to ₹(4,211.24) million during the nine-month period ended December 31, 2023 from ₹(1,530.02) million in nine-month period ended December 31, 2022.

Tax expenses

The Trust Group recorded current tax of ₹(75.08) million during the nine-month period ended December 31, 2023 compared to ₹351.25 million during the nine-month period ended December 31, 2022. The Trust Group recorded deferred tax of ₹(289.36) million during the nine-month period ended December 31, 2023 compared to ₹(445.56) million during the nine-month period ended December 31, 2022. Accordingly, the total tax expenses of the Trust Group decreased to ₹(364.44) million in nine-month period ended December 31, 2023 from ₹(94.30) million in nine-month period ended December 31, 2022.

Profit/(loss) after tax

As a result of the factors discussed above, the loss after tax of the Trust Group increased to ₹(3,846.80) million in the nine-month period ended December 31, 2023 as compared to loss of ₹(1,435.72) million in the nine-month ended December 31, 2022.

Total comprehensive income/(loss) for the period

The total comprehensive loss increased to ₹(3,846.80) million in the nine-month period ended December 31, 2023 from ₹(1,435.72) million in the nine-month period ended December 31, 2022.

Financial Year 2023 compared to Financial Year 2022

The table below sets forth certain data from the Consolidated Financial Statements for the Financial Years 2023 and 2022.

Particulars	Financial Year 2023	Financial Year 2022
	Amount (in ₹ million)	*Amount (in ₹ million)*
Income		
Revenue from operations	26,912.59	12,404.84
Other income	263.08	100.13
Total income	**27,175.67**	**12,504.97**
Expenses		
Valuation Expenses	2.67	1.46
Audit Fees	5.04	3.13
Operating Expenses	12,865.52	2,029.53
Project Management Fees	2,647.70	1,960.27
Insurance and Security Expenses	14.72	1.12
Trustee Fees	5.95	4.16
Depreciation on Property plant and Equipment	1.25	1.74
Amortisation of Intangible Assets	2,809.17	1,673.16
Finance costs (Interest)	9,005.28	8,670.13
Finance costs (Others)	1,249.41	868.58
Investment Manager Fees	56.52	42.48
Custodian fees	0.09	0.18
Loss on sale of assets	0.01	-
Fair value loss on measurement of other payable	560.53	2,161.31
Other expenses	256.29	235.06
Total expenses	**29,480.14**	**17,652.31**
Profit before tax	**(2,304.47)**	**(5,147.34)**
Tax expenses		

Particulars	Financial Year 2023	Financial Year 2022
	Amount (in ₹ million)	*Amount (in ₹ million)*
Current tax	435.25	8.87
Deferred tax	(468.13)	(720.23)
Total tax expenses	**(32.88)**	**(711.36)**
Profit after tax	**(2,271.59)**	**(4,435.98)**
Other comprehensive income		
Item that will not be reclassified to profit or loss: (a) re-measurement (loss)/gain on defined benefit plans (net of taxes)	-	-
Other comprehensive (loss) for the period/year, net of tax	**-**	**-**
Total comprehensive income for the period/year	**(2,271.59)**	**(4,435.98)**

Note: Legal and professional expenses are included in "Other expenses"

Total income

The total income of the Project SPVs increased to ₹27,175.67 million in the Financial Year 2023 from ₹12,504.97 million in the Financial Year 2022. This increase in total income was primarily due to an increase in contract revenue from road construction and toll revenue.

Revenue from operations

The revenue from operations of the Project SPVs increased to ₹26,912.59 million in the Financial Year 2023 from ₹12,404.84 million in the Financial Year 2022, primarily due to an increase in toll collection upon issuance of completion certificates for IRB HMTL and KGTL on July 1, 2022 and July 20, 2022, respectively, which lead to a hike in tariff for these projects. Further, PDTPL was acquired by the Trust on April 2, 2022 and became a Project SPV from such date onwards.

The contract revenue (road construction) increased to ₹11,672.04 million in the Financial Year 2023 from ₹1,054.48 million in the Financial Year 2022 due to commencement of construction activities by PDTPL. The income arising out of toll collection (net) increased to ₹15,425.76 million in the Financial Year 2023 from ₹10,598.07 million in the Financial Year 2022. Other operating revenue decreased to ₹0.23 million in the Financial Year 2023 from ₹965.16 million in the Financial Year 2022, primarily due to the receipt of claim amounts by KTL and AETL from the NHAI during the Financial Year 2022 as compensation for inability to collect toll because of protests against the farm laws on their project highways, while such amounts were not received during the Financial Year 2023. The revenue from operations of the Project SPVs were reduced on account of revenue sharing with the NHAI for FASTag by ₹ 185.44 million in the Financial Year 2023, compared to a reduction of ₹212.87 million in the Financial Year 2022.

Other income

The other income of the Project SPVs increased to ₹263.08 million in the Financial Year 2023 from ₹100.13 million in the Financial Year 2022. This increase was primarily due to an increase in interest income on bank deposits upon creation of debt service reserve accounts by KGTL and HMTL.

Total expenses

The total expenses of the Project SPVs increased to ₹29,480.14 million in the Financial Year 2023 from ₹17,652.31 million in the Financial Year 2022. This increase was primarily due to an increase in operating expenses, project management fees, amortisation of intangible assets, finance costs (interest), finance costs (others) and investment manager fees, partly offset by a decrease in fair value loss on measurement of other payable.

Operating expenses

Operating expenses increased to ₹12,865.52 million in the Financial Year 2023 from ₹2,029.53 million in the Financial Year 2022. This increase was primarily due to an increase in contract expenses. Contract expenses increased to ₹11,330.91 million in the Financial Year 2023 from ₹1,036.47 million in the Financial Year 2022 due to the commencement of construction activities by PDTPL. Operation and maintenance expenses increased to ₹1,471.41 million in the Financial Year 2023 from ₹939.15 million in the Financial Year 2022 due to resurfacing expenses upon receipt of completion certificates of IRB HMTL and KGTL, and maintenance related expenses in IRB WTL. Technical consultancy and supervision charges amounting to ₹62.84 million were paid during the Financial Year 2023 as against ₹53.20 million paid during the Financial Year 2022. Sub-contracting/security expenses decreased to ₹0.35 million in the financial year 2023 from ₹0.72 million in the Financial Year 2022.

Project management fees

Project management fees increased to ₹2,647.70 million in the Financial Year 2023 from ₹1,960.27 million in the Financial Year 2022 primarily as a result of periodic maintenance expenditure due in few projects.

Amortisation of intangible assets

Amortisation of intangible assets increased to ₹2,809.17 million in the Financial Year 2023 from ₹1,673.16 million in the Financial Year 2022, primarily due to the increase in toll collection upon issuance of completion certificates for IRB HMTL and KGTL on July 1, 2022, and July 20, 2022, respectively, which lead to a hike in tariff for these projects. Further, PDTPL was acquired by the Trust on April 2, 2022.

Finance costs (interest)

Finance costs (interest) increased to ₹9,005.28 million in the Financial Year 2023 from ₹8,670.13 million in the Financial Year 2022. This increase was primarily due to increase in interest on debentures to ₹1,617.52 million from nil, primarily due to refinacing of term loans availed from banks and financial institutions in case of YATL, SYTL and UTL of ₹15,150.00 million, ₹5,910 million and ₹7,000 million, respectively. This was partially set of by decrease in interest to banks and financial institutions from ₹8,670.13 to ₹7,387.76 million from the Financial Year 2022 to the Financial Year 2023.

Finance costs (others)

Finance cost (others) increase from ₹868.58 million to ₹1,249.41 million from the Financial Year 2022 to the Financial Year 2023, primarily due to increase in amortisation of transaction cost, unwinding of discount on provision of MMR and interest unwinding of trade payable- associates.

Investment Manager fees

Investment Manager fees were ₹56.52 million in the Financial Year 2023 as against ₹42.48 million during the Financial Year 2022.

Fair value loss on measurement of other payable

Fair value loss on measurement of other payable decreased to ₹560.53 million in the Financial Year 2023 from ₹2,161.31 million in the Financial Year 2022. During the Financial Year 2022, the Trust Group had filed claims in relation to a project with the NHAI. On actualization of claims in fair valuation working, there was a fair value loss of ₹2,161.31 million. The said loss is non-cash in nature.

Profit/(loss) before tax

As a result of the factors discussed above, the loss before tax decreased to ₹(2,304.47) million in the Financial Year 2023 from loss of ₹(5,147.34) million in the Financial Year 2022.

Tax expenses

The Trust Group recorded deferred tax of ₹(468.13) million in the financial year 2023 compared to ₹(720.23) million in the Financial Year 2022. Accordingly, the total tax expenses of the Trust Group decreased to ₹(32.88) million in the Financial Year 2023 from ₹(711.36) million in the Financial Year 2022.

Profit/(loss) after tax

The loss after tax of the Trust Group decreased to ₹(2,271.59) million in the Financial Year 2023 as compared to (loss) of ₹(4,435.98) million in the Financial Year 2022. This decrease in loss was primarily due to an increase in the income arising out of toll collection (net).

Total comprehensive income/(loss) for the period

The total comprehensive loss decreased to ₹(2,271.59) million in the Financial Year 2023 from ₹(4,435.98) million in the Financial Year 2022.

Financial Year 2022 compared to Financial Year 2021

The table below sets forth certain data from the Consolidated Financial Statements for the Financial Years 2022 and 2021.

Particulars	Financial Year 2022	Financial Year 2021
	Amount (in ₹ million)	*Amount (in ₹ million)*
Income		
Revenue from operations	12,404.84	10,361.51
Other income	100.13	112.71
Total income	**12,504.97**	**10,474.22**
Expenses		
Valuation Expenses	1.46	0.46
Audit Fees	3.13	3.88
Road work and site expenses	3,989.80	3,983.41
Insurance and Security Expenses	1.12	11.43
Trustee Fees	4.16	3.41
Depreciation on Property plant and Equipment	1.74	2.59
Amortisation of Intangible Assets	1,673.16	1,253.09
Finance costs (Interest)	8,670.13	8,046.33
Finance costs (Others)	868.58	181.84
Investment Manager Fees	42.48	46.25
Custodian fees	0.18	0.18
Fair value loss on measurement of other payable	2,161.31	-
Other expenses	235.06	118.97
Total expenses	**17,652.31**	**13,651.84**
Profit/(loss) before tax	**(5,147.34)**	**(3,177.62)**
Tax expenses		
Current tax	8.87	46.20
Deferred tax	(720.23)	369.63

Particulars	Financial Year 2022	Financial Year 2021
	Amount (in ₹ million)	*Amount (in ₹ million)*
MAT Credit utilisation / (Entitlement)	-	(340.97)
Total tax expenses	**(711.36)**	**74.86**
Profit/(loss) after tax	**(4,435.98)**	**(3,252.48)**
Other comprehensive income		
Item that will not be reclassified to profit or loss: (a) re-measurement (loss)/gain on defined benefit plans (net of taxes)	-	-
Other comprehensive (loss) for the period/year, net of tax	**-**	**-**
Total comprehensive income for the period/year	**(4,435.98)**	**(3,252.48)**

**Legal and Professional Fees are included in Other expenses.*

Total income

Our total income increased to ₹12,504.97 million in the Financial Year 2022 from ₹10,474.22 million in the Financial Year 2021. Our revenue from operations increased to ₹12,404.84 million in the Financial Year 2022 from ₹10,361.51 million in the Financial Year 2021. Contract revenue (road construction) decreased to ₹1,054.48 million in Financial Year 2022 from ₹1,863.70 million in the Financial Year 2021, primarily due to decrease in utility shifting works. Our income arising out of toll collection (net) increased to ₹10,385.20 million in the Financial Year 2022 from ₹8,497.81 million in Financial Year 2021, primarily due to increase in toll collection upon receipt of completion certificates for UTL and CGTL on May 31, 2021 and August 14, 2021, respectively, which lead to hike in tariff for these projects.

Expenses

Our total expenses increased to ₹17,652.31 million in Financial Year 2022 from ₹13,651.84 million in Financial Year 2021, primarily due to increase in amortisation of intangible assets, finance costs (interests), finance costs (others) and fair value loss on measurement of other payable and other expenses.

Road work and site expenses

Road work and site expenses were ₹3,989.80 million in the Financial Year 2022, compared to ₹3,983.41 million in the Financial Year 2021. Contract expenses decreased to ₹1,036.47 million in the Financial Year 2022 from ₹1,807.12 million in the Financial Year 2021 due to decline in utility shifting works. Operation and maintenance expenses increased to ₹2,899.41 million in the Financial Year 2022 from ₹2,113.67 million in the Financial Year 2021 due to an increase in provision of major maintenance. Technical consultancy and supervision charges amounting to ₹53.20 million were paid during the Financial Year 2022 as against ₹16.28 million paid during the Financial Year 2021.

Amortisation of intangible assets

Amortisation of intangible assets increased to ₹1,673.16 million in the Financial Year 2022 from ₹1,253.09 million in the Financial Year 2021, primarily due to increase in toll collection upon issuance of completion certificates for UTL and CGTL on May 31, 2021, and August 14, 2021, respectively, which lead to hike in tariff for these projects.

Finance costs (interest)

Finance costs (interest) increased to ₹8,670.13 million in the Financial Year 2022 from ₹8,046.33 million in the Financial Year 2021 due to increase in interest expenses to banks and financial institutions. This is due to loans availed for projects under construction.

Finance costs (others)

Finance costs (others) increased to ₹868.58 million in the Financial Year 2022 from ₹181.84 million in the Financial Year 2021 primarily due to increase in interest unwinding of trade payable-associates to ₹655.78 million from in the Financial Year nil in the Financial Year 2022.

Investment manager fees

Investment manager fees stood at ₹42.48 million in the Financial Year 2022 as against ₹46.25 million in the Financial Year 2021.

Other expenses

Other expenses increased to ₹235.06 million in the Financial Year 2022 from ₹118.97 million in the Financial Year 2021.

Fair value loss on measurement of other payable

The increase was on account of fair valuation of claim receivable from the NHAI, on the basis of which liability towards 'Payable – IRB' is determined in the Private InvIT's financial statements. During the Financial Year 2022, the Trust Group had filed claims in relation to a project with the NHAI. On actualization of claims in fair valuation working, there was a fair value loss ₹2,161.31 million. The said fair value loss is non-cash in nature.

Profit/(loss) before tax

As a result of the factors discussed above, the profit/(loss) before tax decreased to ₹(5,147.34) million in the Financial Year 2022 from ₹(3,177.62) million in the Financial Year 2021.

Tax expenses

The Trust Group recorded deferred tax of ₹(720.23) million in the Financial Year 2022 compared to deferred tax expenses of ₹369.63 million in the Financial Year 2021. Accordingly, the total tax expenses of the Trust Group decreased to ₹(711.36) million in the Financial Year 2022 compared to ₹74.86 million in the Financial Year 2021.

Profit/ (loss) after tax

The profit/(loss) after tax decreased to ₹(4,435.98) million in the Financial Year 2022 as compared to a loss of ₹(3,252.48) million in the Financial Year 2021. The decrease was primarily due to an increase in the finance costs, amortization expenses and other expenses, which includes loss on account of fair valuation of claim lodged with the NHAI.

Total comprehensive income/(loss) for the period

The total comprehensive income/(loss) decreased to ₹(4,435.98) million in the Financial Year 2022 from ₹(3,252.48) million in the Financial Year 2021.

Liquidity and Capital Resources

The Project SPVs operate in a capital-intensive industry and their principal liquidity requirements have been to finance their capital expenditures. To fund these costs, the Project SPVs have historically relied on equity contributions, short term and long-term borrowings and cash from operating activities.

The Project SPVs' funding and treasury activities are conducted consistent with corporate policies designed to enhance investment returns while maintaining appropriate liquidity for their requirements. Their short-term liquidity requirements relate to servicing debt and funding working capital requirements. Sources of short-term liquidity include cash balances and receipts from operations. Their long-term liquidity requirements include partial funding of investments in new projects, funding equity contributions in Project SPVs and repayment of long-term debt under credit facilities. Sources of funding for long-term liquidity requirements include loans, equity issuances or debt issues. The principal liquidity requirements have been, and are expected to continue to be, construction, development, implementation and maintenance costs of the BOT and TOT projects.

The Investment Manager believes that after taking into account the expected cash to be generated from our business and operations, we have sufficient funds for both our present and anticipated future requirements for working capital for 12 months following the date of Allotment.

Cash Flows

The following table sets forth certain information relating to the Project SPVs cash flows for the periods indicated:

(₹ in million)

Particulars	Nine-month period ended December 31, 2023	Nine-month period ended December 31, 2022	Financial Year 2023	Financial Year 2022	Financial Year 2021
Net cash flows generated from operating activities	(1,897.95)	10,001.24	13,513.70	19,882.59	7,489.54
Net cash flows (used in) investing activities	(96,503.27)	(10,035.50)	(13,801.66)	(18,311.44)	(19,598.04)
Net cash flows generated from financing activities	98,355.47	1,995.17	731.91	(1,697.41)	12,332.32
Net increase/ (decrease) in cash and cash equivalents	(45.75)	1,960.90	443.95	(126.26)	223.81

Cash flows from operating activities

Nine-month period ended December 31, 2023

In the nine-month period ended December 31, 2023, the Project SPVs' net cash flow from operating activities was ₹(1,897.95) million and the loss before tax was ₹(4,211.24) million, which was adjusted for non-cash and other items amounting to ₹14,345.23 million and change in working capital amounting to ₹(11,960.23) million, primarily on account of decrease in trade payables amounting to ₹(11,873.19) million, decrease in other financial liabilities amounting to ₹(1,474.83) million, decrease in other assets amounting to ₹2,313.69 million and increase in other financial assets amounting to ₹(738.77) million. The cash generated from operations was ₹(1,826.24) million and net taxes paid were ₹(71.71) million in the nine-month period ended December 31, 2023.

Nine-month period ended December 31, 2022

In the nine-month period ended December 31, 2022, the Project SPVs' net cash flow from operating activities was ₹10,001.24 million and the loss before tax was ₹(1,530.02) million, which was adjusted for non-cash and other items amounting to ₹11,023.22 million and change in working capital amounting to ₹687.53 million, primarily on account of increase in trade payables amounting to ₹484.04 million, decrease in other financial assets amounting to ₹496.71 million and decrease in other liabilities amounting to ₹(438.94) million. The cash generated from operations was ₹10,180.73 million and net taxes paid were ₹(179.49) million in the nine-month ended December 31, 2022.

Financial Year 2023

In the Financial Year 2023, the Project SPVs' net cash flow from operating activities was ₹13,513.70 million and the loss before tax was ₹2,304.47 million, which was adjusted for non-cash and other items amounting to ₹14,836.70 million and change in working capital amounting to ₹1,327.31 million, primarily on account of increase in trade payables amounting to ₹1,178.92 million, increase in other financial liabilities amounting to ₹435.72 million and increase in other assets amounting to ₹(343.36) million. The cash generated from operations was ₹13,859.54 million and net taxes paid were ₹(345.84) million in the Financial Year 2023.

Financial Year 2022

In the Financial Year 2022, the Project SPVs' net cash flow from operating activities was ₹19,882.59 million and the loss before tax was ₹5,147.34 million, which was adjusted for non-cash and other items amounting to ₹14,271.25 million and change in working capital amounting to ₹10,726.60 million, primarily on account of increase in trade payables amounting to ₹11,498.13 million and increase in other financial assets amounting to ₹ 989.59 million. The cash generated from operations was ₹19,850.51 million and net taxes paid were ₹32.09 million in the year ended March 31, 2022.

Financial Year 2021

In the Financial Year 2021, the Project SPVs' net cash flow from operating activities was ₹7,489.54 million and the loss before tax was ₹3,177.62 million, which was adjusted for non-cash and other items in a net amount of ₹9,677.32 million and changes in working capital and other provisions, such as increase in trade payables of ₹2277.55 million due to construction work execution, decrease in trade receivable of ₹251.88 million due to increase in utility shifting works and decrease in other liabilities of ₹52.75 million due to increase in advance from customer. The cash generated from operations was ₹7,474.83 million and net taxes paid were ₹14.70 million in the year ended March 31, 2021.

Cash used in investing activities

Nine-month period ended December 31, 2023

The Project SPVs' net cash used in investing activities in the nine-month period ended December 31, 2023 was ₹(96,503.27) million, primarily attributable to addition towards construction for projects (classified as toll collection rights under intangible assets).

Nine-month period ended December 31, 2022

The Project SPVs' net cash used in investing activities in the nine-month month period ended December 31, 2022 was ₹(10,035.50) million, primarily attributable to addition towards construction for projects (classified as toll collection rights under intangible assets).

Financial Year 2023

The Project SPVs' net cash used in investing activities in the Financial Year 2023 was ₹(13,801.66) million, primarily attributable to addition towards construction for projects (classified as toll collection rights under intangible assets).

Financial Year 2022

The Project SPVs' net cash used in investing activities in the year ended March 31, 2022 was ₹(18,311.44) million, primarily attributable to addition towards construction for projects (classified as toll collection rights under intangible assets).

Financial Year 2021

The Project SPVs' net cash used in investing activities in the year ended March 31, 2021 was ₹(19,598.04) million, primarily attributable to addition towards construction for projects (classified as toll collection rights under intangible assets).

Cash flows generated from financing activities

Nine-month period ended December 31, 2023

Net cash generated from financing activities in the nine-month month ended December 31, 2023 was ₹98,355.47 million, primarily consisting of borrowings from banks/financial institutions, proceeds from issue of equity share capital, proceeds from issue of Subordinate Debt, offset in part by repayments of borrowings and finance cost paid and return of capital.

Nine-month period ended December 31, 2022

Net cash generated from financing activities in the nine-month period ended December 31, 2022 was ₹1,995.17 million, primarily consisting of borrowings from banks/financial institutions, partly offset by repayments of borrowings and finance cost paid.

Financial Year 2023

Net cash generated from financing activities in the Financial Year was ₹731.91 million, primarily consisting of borrowings from banks/financial institutions and proceeds from issue of equity share capital.

Financial Year 2022

Net cash generated from financing activities in the Financial Year 2022 was ₹(1,697.41) million, primarily consisting of finance cost.

Financial Year 2021

Net cash generated from financing activities in the Financial Year 2021 was ₹12,332.32 million, primarily consisting of borrowings from banks/financial institutions and issue of equity share capital and subordinated debt.

Indebtedness

The table below provides the types and amounts of our outstanding indebtedness as at December 31, 2023.

(₹ in million)

	As at December 31, 2023
Non-current Borrowings	
Term loans	
Indian rupee loan from banks (secured)	
Project loans for SPVs	110,031.99
Less : current maturities expected to be settled within 12 month from balance sheet date	(737.46)
Total (a)	**109,294.53**
Indian rupee loan from financial institutions (secured)	
Project loans for SPVs	35,715.62
Less : current maturities expected to be settled within 12 month from balance sheet date	(362.50)
Total (b)	**35,353.12**
Non-convertible debentures (secured)	28,041.14
Less : current maturities expected to be settled within 12 month from balance sheet date	(53.38)
Total (c)	**27,987.76**
Less: Unamortised transaction cost **(d)**	(3,485.17)
Total non-current borrowings (e = a + b + c + d)	**169,150.24**
	Current Borrowings
Short-term borrowings (secured)	
Current maturity of long term loans	
Indian rupee loan from banks (secured)	737.46
Indian rupee loan from financial institutions (secured)	362.50
Non convertible debentures (secured)	53.38
Interest accrued but not due on borrowings	10.08
(Unsecured, repayable on demand and interest free)	
Loan from related parties	97.66
Total current borrowings (f)	**1,261.08**
Total borrowings (e + f)	**170,411.32**

	As at December 31, 2023
Aggregate secured loans	170,303.58
Aggregate unsecured loans	97.66

As at December 31, 2023, the Project SPVs had total borrowings aggregating to ₹170,411.32 million on a consolidated basis, of which ₹170,303.58 million was secured. The Project SPVs' secured financing arrangements are secured by their movable and immovable assets, including a charge on equipment as well as on their intangible assets relating to toll collection rights under the various projects. Also see "*Financial Indebtedness*" on page 689.

Contractual Obligations and Commitments

The following table sets forth certain information relating to future payments due under contractual commitments as of December 31, 2023, aggregated by type of contractual obligation:

(₹ in million)

Particulars	Total	On Demand	Less than 1 year	1 to 5 years	> 5 years
Borrowings (Gross of unamortised transaction cost)	173,896.49	97.66	1,163.42	16,521.37	156,114.04
Other financial liabilities	39,117.50	-	1,623.92	37,493.58	-
Trade payables	7,947.24	-	7,947.24	-	
Total	**220,961.23**	**97.66**	**10,734.58**	**54,014.95**	**156,114.04**

Contingent Liabilities and other Off-Balance Sheet Arrangements

Contingent liabilities not provided for

As of March 31, 2023, there are no contingent liabilities which are not provided for in the Consolidated Financial Statements for the Trust and the Project SPVs.

There are no off-balance sheet arrangements that have or are reasonably likely to have an adverse effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that the Investment Manager believe are material to investors.

Transactions with Related Parties

The Project SPVs have in the course of their business entered into various transactions with related parties. These transactions include operation and maintenance charges paid for operation and maintenance activities sub-contracted, loans and advances, certain road work expenses for work road work contracted to various Sponsor entities in similar businesses. Further, the Trust has also provided Shareholder Loans to the Project SPVs. The acquisitions of PDTPL, IRB GEPL and STPL were also related party transactions. The proposed investment in IRB LTPL, IRB GTPL and IRB KTPL, by subscription of equity shares and providing unsecured loans to such Project SPVs, will also be a related party transaction.

For further information, see "*Related Party Transactions*" on page 294 and "*Financial Statements*" on page 333.

Material developments since the date of the last balance sheet

- In an arbitration proceeding initiated by YATL, the arbitration tribunal has announced an award upholding the claim of YATL by directing the NHAI to pay compensation of ₹17,195 million, inclusive of interest till date of the award, and to extend the concession period for the project by 689 days.

- The Trust has announced its second distribution for the Fiscal 2024 of ₹2.82 per Unit to the eligible Unitholders holding Units as of February 1, 2024. This distribution of "return of capital" has impacted the Trust's paid-up Unit capital.

- On March 11, 2024, IRB LTPL has achieved financial closure for implementation of its project by tying up the project finance cost of ₹35,000.00 million with the lenders.

- On March 14, 2024, the Financial Investors, the Sponsor, the Investment Manager and Cintra have entered into amendments to the Framework Agreement and the IM SHA in relation to: (i) the sale of

24% of the equity shares of the Investment Manager to the Cintra IM Investor; and (ii) the sale of 24% of the Units of the Trust by certain Financial Investors to the Cintra InvIT Investor. The amendments will be effective upon the completion of the Cintra Transaction. Closing of the Cintra Transaction is subject to the receipt of requisite regulatory approvals. The Investment Manager is also a party to a share purchase agreement dated March 14, 2024 with Croxley and the Cintra IM Investor for the purchase of 24% of the equity shares of the Investment Manager by the Cintra IM Investor from Croxley.

Except as disclosed above and in this Letter of Offer, the Investment Manager is not aware of any circumstances that have arisen since December 31, 2023, that materially and adversely affect, or are likely to affect, the Trust's or the Project SPVs' operations or profitability, the value of the Trust's or the Project SPVs' respective assets, or the Trust's or the Project SPVs' ability to pay their respective material liabilities within the next 12 months.

Quantitative and Qualitative Disclosure about Market Risk

Interest rate risk

As the infrastructure development and construction business is capital intensive, the Project SPVs are exposed to interest rate risk. Interest rates for borrowings have been volatile in India in recent periods. The Project SPVs infrastructure development and construction projects were funded to a large extent by debt and increases in interest expense could have an adverse effect on their results of operations and financial condition. The Project SPVs current debt facilities carry interest at variable rates as well as fixed rates with the provision for periodic reset of interest rates. As of December 31, 2023, the majority of the Project SPVs' total indebtedness was subject to variable rates. Although from time to time we may engage in interest rate hedging transactions or exercise any rights available to us under these financing arrangements to terminate the existing debt financing arrangement on the respective reset dates and enter into new financing arrangements, there can be no assurance that we will be able to do so on commercially reasonable terms, that our counterparties will perform their obligations, or that these agreements, if entered into, will protect us adequately against interest rate risks.

Inflation Risk

In recent years, India has experienced relatively high rates of inflation. While we believe inflation has not had any material impact on our business and results of our operations, inflation generally impacts the overall economy and business environment and could affect us.

Quality of income

The majority of our income on a consolidated basis is from the collection of toll. This is based on actual receipts by each of the Project SPVs. There are no management estimates or judgement involved in the recognition of our revenues. For further information see "*– Factors affecting Results of Operations*", "*– Significant Accounting Policies*" and "*– Components of Income and Expenses*".

Unusual or Infrequent Events or Transactions

Except as described in this Letter of Offer, there have been no events or transactions to our knowledge which may be described as "unusual" or "infrequent".

Known Trends or Uncertainties

Except as described in "*Risk Factors*" on page 17 and elsewhere in this Letter of Offer, to our knowledge, there are no known trends or uncertainties that have had or are expected to have a material adverse impact on our revenues.

Future Relationships between Costs and Income

Except as discussed in "*Risk Factors*" and elsewhere in this Letter of Offer, there are no known factors that will have a material adverse impact on our operations or finances.

Competitive Conditions

Please see "*Risk Factors*" and "*- Factors affecting Results of Operations*" on pages 17 and 668, respectively.

Significant Economic Changes that Materially Affected or are Likely to Affect Income from Continuing Operations

Our business has been subject, and we expect it to continue to be subject, to significant economic changes that materially affect or are likely to affect our income from continuing operations identified above in "– *Factors affecting Results of Operations*" and the uncertainties described in "*Risk Factors*" on pages 668 and 17, respectively.

FINANCIAL INDEBTEDNESS

The following is a summary of the indebtedness of the Project SPVs, together with a brief description of certain material covenants of the relevant financing agreements. Applicants should also refer to "Background and Structure of the Trust" and "Financial Statements" on pages 91 and 333, respectively.

The Project SPVs have primarily availed loans, for financing, in part, the project costs in relation to the construction and development of their respective underlying road infrastructure asset. Certain Project SPVs have availed further financing, as necessary, for refinancing existing loans or with respect to the repayment obligations under previously availed loans.

Set forth below is a brief summary of the aggregate borrowings of the Trust and the Project SPVs as at December 31, 2023.

Category of Borrowing*	Aggregate Amount (₹ in Millions)	Outstanding amount as at December 31, 2023# (₹ in Millions)
AETL		
Term Loans		
Secured	6767.90	6,766.21
Unsecured	-	20,828.51
Total		**27,594.72**
CGTL		
Term Loans		
Secured	14,000.00	13,903.71
Unsecured	-	879.09
Total		**14,782.80**
IRB HMTL		
Term Loans		
Secured	15,043.10	14,946.07
Unsecured	-	9,938.01
Total		**24,884.08**
IRB WTL		
Term Loans		
Secured	9,605.30	9,538.54
Unsecured	-	14,874.79
Total		**24,413.33**
KGTL		
Term Loans		
Secured	9,996.00	9,944.52
Unsecured	-	2,657.28
Total		**12,601.80**
KTL		
Term Loans		
Secured	4,827.40	4,801.81
Unsecured	-	14,328.55
Debentures	-	-
Total		**19,130.36**
SYTL		
Term Loans		
Secured	-	-
Unsecured	-	8,627.17
Debentures	5,910.00	5,910.00
Total		**14,537.17**
UTL		
Term Loans		
Secured	7,609.00	8,299.99
Unsecured	-	1,895.35
Debentures	7,000.00	6,981.14
Total		**17,176.48**
YATL		
Term Loans		

Category of Borrowing*	Aggregate Amount (₹ in Millions)	Outstanding amount as at December 31, 2023# (₹ in Millions)
Secured	-	-
Unsecured	-	21,502.94
Debentures	15,150.00	15,150.00
Total		**36,652.94**
PDTPL		
Term Loans		
Secured	16,500.00	8,289.01
Unsecured	-	-
Total		**8,289.01**
IRB GEPL		
Term Loans		
Secured	55,000.00	51,978.06
Unsecured	-	21,465.00
Total		**73,443.06**
STPL		
Term Loans		
Secured	14,460	-
Unsecured	-	97.66
Total		**97.66**
IRB LTPL		
Term Loans		
Secured^	-	-
Unsecured	-	0.60
Total		**0.60**
IRB Infrastructure Trust		
Term Loans		
Secured	63,900.00	63,276.84
Unsecured	-	-
Debentures	-	-
Total		**63,276.84**

**Excludes interest accrued but not due.*

#IRB GTPL and IRB KTPL were incorporated by the Trust on January 1, 2024 and accordingly there were no outstanding borrowings for these Project SPVs as at December 31, 2023.

^Subsequently, IRB LTPL has entered into agreements for availing secured borrowing amounting up to ₹35,000.00 million and has achieved financial closure.

Principal Terms of the Borrowings availed by the Trust

The Trust represented by the Investment Manager has entered into a loan agreement dated September 18, 2023 (the "**Rupee Loan Agreement**"), to avail secured loans to be utilized towards, *inter alia*, repayment of existing external debt to senior lenders of certain Project SPVs, creation of debt service reserve and major maintenance reserve by certain Project SPVs and meeting transaction expenses as specified in the Rupee Loan Agreement. Such loans availed by the Trust are secured by the first ranking *pari passu* charge on, *inter-alia*, (i) security interest on all present and future movable assets and the receivables of the Trust; (ii) all bank accounts of the Trust; (iii) on the debt service reserve account and all funds deposited therein time to time, (iv) charge by way of assignment on (a) all right, title, interest, claims, benefits and demands whatsoever of the Trust in, to and under all the loans and advances extended by the Trust to certain Project SPVs.

Pursuant to the Rupee Loan Agreement, the Trust has, *inter-alia*, undertaken, that it shall (i) directly control, including have management control, of certain Project SPVS, (ii) hold and retain 100% of shareholding in certain Project SPVs, (iii) upon occurrence of an event of default, not exercise its rights under the financing documents with specified Project SPVs without the prior consent of the security trustee; (iv) create and fund and maintain the debt service reserve on and from the date of first disbursement until the final settlement date, subject to certain conditions; (v) create and maintain an additional cash reserve; and (vi) ensure that certain Project SPVs create and maintain a major maintenance reserve, as set out in the Rupee Loan Agreement.

Events of Default: The Rupee Loan Agreement contains, amongst others, the following events of default:

(i) Failure to make payments when due under the financing documents, at the place and in the currency in which it is expressed to be payable;
(ii) Breach of covenant, undertaking, condition or any other obligation under the financing documents;
(iii) Any representation or warranty or statement made or repeated by the borrowers in any transaction document, is materially false, incorrect, incomplete, inaccurate or misleading;
(iv) The units of the Trust cease to be listed on the stock exchange or cease to exist;
(v) Any fraud or forgery committed by the Trust.

Consequences of Default: The Rupee Loan Agreement sets out, *inter-alia*, the following consequences of default:

(i) Acceleration/part acceleration of the maturity of the loan and declaration that all the outstanding amount be payable on demand;
(ii) Suspension or cancelation of the commitments;
(iii) Sue for creditors process or declare that the security created in favor of the rupee lenders or the common security trustee is enforceable; and
(iv) Exercise any other right that the parties may have under the transaction documents or under applicable law.

This is an indicative list of the terms of the Rupee Loan Agreement and there may be additional terms, conditions and requirements under the Rupee Loan Agreement entered into by us.

Principal Terms of the Borrowings availed by the Project SPVs

1. **Interest and commissions:** In terms of the loans availed by the Project SPVs, the interest rate is a base rate specified by the lender plus applicable spread, if any, per annum. The applicable spread varies among different loans. The rate of interest upon non-convertible debentures is at a fixed rate per annum for the next two to seven years.

2. **Maturity and Repayment:** The final maturity period of the loans availed by the Project SPVs ranges from October 2028 to July 2043. These loans and non-convertible debentures are repayable in accordance with the repayment/redemption schedule specified in the relevant financing agreements, which typically prescribe monthly instalments for rupee loans (except for PDTPL, which prescribes quarterly instalments) and monthly instalments/bullet payment with respect to the non-convertible debentures.

3. **Security:** In terms of borrowings where security needs to be created, the Project SPVs are typically required to create:

   a. A first charge by way of hypothecation of all the Project SPV's movables, including moveable plant and machinery, machinery spares, tools and accessories, furniture, fixtures, vehicles and all other movable assets, present and future, excluding the project assets;

   b. A first ranking charge over all accounts of the Project SPV, including, *inter alia*, the escrow account, trust and retention account, DSR account and the sub-accounts that may be opened in accordance with the facility agreement/debenture trust deed and the supplementary escrow agreement, or any of the other project agreements and all funds from time to time deposited therein, the receivables and authorised investments or other securities for the purpose of being applied to the extent of the waterfall of priority specified in the concession agreement;

   c. A first charge on the Project SPV's intangibles, including but not limited to goodwill and uncalled capital, present and future, excluding the project assets;

   d. A first ranking *pari passu* charge over all of the Project SPV's immovable assets, both present and future, if any;

   e. A substitution agreement, as may be executed between the NHAI, the Project SPV and its respective lenders, whereby the NHAI may substitute the Project SPV by a selectee of its respective lenders, for the purpose of securing the payment of lender dues;

   f. A pledge of a certain specified percentage of the equity shares of the Project SPVs that are held by the Sponsor (directly or indirectly);

g. An irrevocable and unconditional corporate guarantee/undertaking from the Sponsor/Trust and/or certain other members of the Sponsor group to meet shortfall between outstanding amount of obligations and termination payments received from NHAI in case of termination of the concession agreements;

h. Assignment on *pari passu* basis by way of hypothecation of all toll receivables, cash flows and revenue and other project documents;

i. The right, title and interest of the Project SPV by way of first charge in, to and under all the applicable permits, insurance policies and uncalled capital of the Project SPV; and

j. The right, title and interest of the Project SPV by way of first charge in, to and under (a) the project documents/project agreements and (b) the guarantees, other performance warranties, indemnities and security that may be furnished in favor of the Project SPV by various contractors.

4. **Covenants:** Borrowing arrangements entered into by the Project SPVs contain certain restrictive conditions and covenants restricting certain corporate actions and the respective Project SPV is required to take the prior approval of the lender/trustee before carrying out such activities. Each of the Project SPVs are also required to adhere to certain financial covenants, which include but are not limited to, maintaining a prescribed debt to equity ratio during the currency of the loan and maintaining a minimum debt service coverage ratio during certain periods.

   A Project SPV is required to intimate and/or obtain prior written permission of its lenders, *inter alia*, in the following instances:

   a. Effecting any change in the nature or scope of the project or any change in the financing plan;

   b. Effecting any change in capital structure (including shareholding pattern);

   c. Raising any equity or preference share capital;

   d. Making any capital expenditure other than permitted investments;

   e. Making any dividend payments to the Trust or making any other restricted payments (including redemption of any shares of any class, prepayment in relation to any indebtedness, payment of interest on unsecured loans, investment in any entity) except as permitted under the financing agreements;

   f. Creation of any security interest in any of the secured property;

   g. Incurrence of any other indebtedness, including the issue of debentures other than permitted indebtedness;

   h. Entering into any partnership, profit-sharing or royalty agreement;

   i. Removal of any person exercising substantial powers of management over the affairs of the Project SPVs in case of an event of default;

   j. Amending the constitutional documents of the Project SPVs;

   k. Undertaking of any new project or making of any investment or taking any assets on lease;

   l. Providing guarantees, indemnities or similar assurances in respect of indebtedness of any other person, (other than in the ordinary course of business);

   m. Repay or prepay any subordinated loan or loans brought in as equity taken by the Project SPVs from the Sponsor;

   n. Create any subsidiary or permit the Project SPV to become a subsidiary;

o. Undertake or permit any scheme of arrangement or compromise with its creditors or shareholders; and

p. Change in the composition of the board of directors of the Project SPV.

Certain lenders have the ability to opt for a put/call option after a minimum period of five years from the scheduled commercial operation date or a refinance option after a block of five years as per their internal guidelines.

Additionally, if a Project SPV receives funds in respect of the following then the monies received to be utilized to prepay the loans, upon request from the lenders, on a *pro rata* basis to all the lenders without any prepayment premium: (a) any liquidated damages/ penalties received; (b) any proceeds arising in connection with a breach of warranty or guarantee; (c) any insurance proceeds; (d) any proceeds arising in relation to the expropriation or other taking by any government entity of the project assets; (e) any proceeds arising from any termination payments/ buy-out payments received; and (f) any proceeds resulting from an arbitral or judicial award received. The lenders of certain Project SPVs have the right to accelerate the repayment of the unamortized portion of the loans at any time, in the event the cash flows of such Project SPV are adequate for such acceleration.

In relation to outstanding debentures, the relevant Project SPV is required to undertake mandatory redemption on a *pro-rata* basis to all the debenture holders from the proceeds of any amount received by and on behalf of the issuer from any such event if the event involves receipt of, *inter-alia*: (a) insurance proceeds; (b) proceeds from a breach of warranty or guarantee; (c) payments received on account of buy-out events; (d) liquidated damages or penalties paid under project agreement; or (e) proceeds from expropriation or takeover event.

5. **Events of Default:** Borrowing arrangements entered into by the Project SPVs contain standard events of default, including:

a. Non-payment of principal amount by the Project SPV;

b. Non-payment of interest, additional interest, liquidated damages, free or other amount by the Project SPV;

c. Default by the borrower in creation of security interest to the satisfaction of the lenders within the period stipulated;

d. Default or breach in the performance of any covenants and/or covenants under the agreement by the Project SPV;

e. Misrepresentation made by the Project SPV under the agreement or any financing document provided in connection with the loan;

f. Sale, disposal or creation of any charge or encumbrance on any of the land, building, structures or plant and machinery of the Project SPVs in breach of any of the provisions of the relevant project agreements, without prior written approval of the relevant lenders;

g. Undertaking any action for reorganization of the Project SPV without the approval of the relevant lenders;

h. Default in performance or observance of any covenant, condition, warranty or provision contained in any other financing agreement entered into by the Project SPV;

i. Failure on the part of the Project SPV to maintain adequate insurances in accordance with the terms of the transaction documents;

j. The Project SPV ceasing or threatening to cease to carry on its business or giving notice of its intention to do so;

k. The Project SPV abandoning its project;

l. Violation or breach of any environmental, health and safety standards requirement; and

m. The Project SPV ceasing or threatening to cease to carry on its business or giving notice of its intention to do so or it becoming unlawful for the borrower to carry on its business.

The descriptions above are indicative, and there may be additional terms and conditions with respect to security, financial or other covenants and events of default under the various borrowing arrangements entered into by the Project SPVs. The Project SPVs are required to ensure that the aforementioned events of default and other events of default, as specified under the various documents and agreements entered into by such Project SPV for the purpose of availing of loans, are not triggered.

SECTION VIII – LEGAL AND OTHER INFORMATION

MATERIAL LITIGATION AND REGULATORY ACTION

Except as stated below, there is no outstanding material litigation or regulatory action (i) involving the Project SPVs; (ii) against the Trust or its Associates; (iii) against the Investment Manager or its Associates; (iv) against the Sponsor/Project Manager or its Associates or the Sponsor Group; and (v) against the Trustee.

*For purposes of this section, details of all regulatory actions and criminal matters that are currently outstanding involving the Project SPVs or against the Trust, the Investment Manager, the Sponsor/Project Manager and their respective Associates and the members of the Sponsor Group have been disclosed. Notices received by any of the above entities (collectively, the "**Relevant Parties**") from third parties (excluding notices from statutory, regulatory or tax authorities or notices threatening criminal action) shall not be evaluated for materiality until the Relevant Parties are impleaded as defendants in proceedings before any judicial forum.*

Outstanding litigation against any of the Project SPVs before any judicial forum involving a claim amount exceeding ₹135.88 million, being 0.5% of the income of the Project SPVs for the last completed Financial Year (i.e., the Financial Year 2023), in accordance with the Consolidated Financial Statements shall be considered material. In relation to outstanding litigation where the monetary liability is not quantifiable, such litigation shall be considered material in the event that the outcome of such litigation would have a material adverse effect on the position of the Project SPVs.

Outstanding litigation against the Sponsor/Project Manager, the Investment Manager and their respective Associates (excluding the Project SPVs) and the members of the Sponsor Group before any judicial forum involving a claim amount exceeding ₹335.17 million, being 0.5% of the income of the Sponsor for the last completed Financial Year (i.e., the Financial Year 2023), in accordance with its audited consolidated financial statements for the Financial Year 2023 shall be considered material. In relation to outstanding litigation where the monetary liability is not quantifiable, such litigation shall be considered material in the event that the outcome of such litigation would have a material adverse effect on the position of the Sponsor or the Investment Manager, as applicable, or the Trust.

Further, due to the nature and extent of their operations, the Sponsor/Project Manager and the Project Entities (including the Project SPVs) are and may be routinely required to file complaints and/or register first information reports against various persons, on account of such persons, inter-alia, refusing to pay toll, causing injury to the employees or contract labour of such entities and damage to the properties of such entities, which have been not been disclosed. Additionally, there have been various criminal complaints, compensation claims and first information reports filed against the employees and contract labour of the Sponsor/Project Manager and the Project Entities (including the Project SPVs), in which such entities are not impleaded, which have not been disclosed.

With respect to the Trustee, details of all regulatory actions and criminal matters that are currently outstanding against the Trustee have been disclosed. Outstanding litigation against the Trustee that the Trustee has determined to be material has been disclosed.

Taxation proceedings against the Relevant Parties (and, in case of the Project SPVs and involving the Project SPVs) have been disclosed in a consolidated manner.

It is clarified that the above policy on materiality is solely for preparing disclosures for purposes of the Issue, in accordance with the requirements prescribed under the InvIT Regulations.

I. Material Litigation and Regulatory Action against the Trust and its Associates

Material Litigation and Regulatory Action against the Trust

As at the date of this Letter of Offer, there is no outstanding material litigation or regulatory action against the Trust. For details in relation to outstanding material litigation and regulatory action against the Associates of the Trust, please see below.

II. Material Litigation and Regulatory Action against the Sponsor/Project Manager, Associates of the Sponsor/Project Manager and the Sponsor Group

Material Litigation and Regulatory Action against the Sponsor/Project Manager

As at the date of this Letter of Offer, there is no outstanding criminal litigation against the Sponsor/Project Manager. Other than as disclosed below, there is no outstanding material civil litigation, regulatory action or other material litigation against the Sponsor/Project Manager.

Outstanding Material Civil Litigation

1. Hakim Singh Yadav and others (the "**Petitioners**") have filed a writ petition before the High Court of Allahabad against the Sponsor and others (the "**Respondents**") in relation to the road asset operated by AETL, seeking to quash the contract order for the construction of the drainage system and directing the relevant authority concern to revaluate the technical measures adopted in drainage work. The Petitioners have alleged, *inter-alia*, that faulty construction and design of the drainage system have resulted in the flooding of a nearby area. The matter is currently pending.

2. Mr. Shaikh Rafiq and others have filed a writ petition against the Sponsor, Modern Road Makers Private Limited (an Associate of the Sponsor), YATL and others before the High Court of Bombay, Aurangabad (the "**BHC Aurangabad**") bench in relation to acquisition of land for the four laning of Yedshi – Aurangabad road that forms a part of the Solapur – Aurangabad highway, i.e., NH 211. For details, see " *– Material Litigation and Regulatory Action involving the Project SPVs– YATL*" on page 707.

3. Mr. Panditrao Digambarrao Shete Chausalkar and another have filed a writ petition against the Sponsor, YATL and others before the BHC Aurangabad in relation to acquisition of land for the four laning of Yedshi – Aurangabad road that forms a part of the Solapur – Aurangabad highway, i.e., NH 211. For details, see " *– Material Litigation and Regulatory Action involving the Project SPVs– YATL*" on page 707.

4. Mr. Pruthviraj Shahane (the "**Petitioner**") has filed a civil suit against the Sponsor, YATL and others before the Civil Judge (Senior Division), Beed. For details, see " *– Material Litigation and Regulatory Action involving the Project SPVs – YATL*" on page 707.

5. Kishore Mukherjee has filed a writ petition in the High Court of Calcutta against the Sponsor and others praying that the tender for the Palsit to Dankuni project should be halted, an environment impact assessment should be obtained and pending the disposal of the matter, the respondents (including the Sponsor) should be directed not to uproot any trees from Panagarh to Dankuni on NH 19. The matter is currently pending.

6. Kanugula Mahesh Kumar ("**Petitioner**") has filed a public interest litigation before the High Court of Telangana (the "**High Court**") against the State of Hyderabad, the HMDA, the HGCL, the Sponsor and IRB GEPL. For details, see " *– Material Litigation and Regulatory Action involving the Project SPVs – IRB GEPL*" on page 708.

7. Sanat Ghosh and others have filed a petition before the High Court of Calcutta against the Sponsor and PDTPL. For details, see "*—Material Litigation and Regulatory Action involving the Project SPVs – PDTPL*" on page 707.

Outstanding Regulatory Action

NHAI issued a notice to the Sponsor asking to pay damages of ₹30,485 in relation to the toll plaza Krishnavaram. The Sponsor has replied in its letter. As on date, no legal proceedings have been initiated in relation to the aforesaid notice.

Other Material Litigation

1. The Sponsor had initiated arbitration proceedings against Hyderabad Growth Corridor Limited (the "**Respondent**") in connection with a road project in Hyderabad. The Sponsor has claimed an amount of ₹982.69 million for losses suffered by the Sponsor due to a failure by the respondent to provide a toll management system. The Respondent has denied the allegations of the Sponsor and stated that it was not

required to provide a toll management system under the terms of the contract between the parties. The Sponsor has received an arbitral award partially in its favor, but as of the date of this Letter of Offer, the Respondent has not made the payments as directed in the award. Further, the Sponsor has filed an appeal before the XXIV Additional Chief Judge cum Commercial Court, City Civil Court, Hyderabad against the arbitral award stating the arbitral tribunal has without any reason and in complete disregard of settled principles of law, diallowed part of the compensation claimed by the Sponsor against the Respondent despite finding that the Respondent had failed to fulfil its contractual obligations resulting into drastic reduction in the toll revenue. Further, the Respondent had filed a petition before the Commercial Courts cum Hon'ble XIII District Judge, Ranga Reddy District ("**Court**"), praying to set aside the award for part of the claim under the arbitration award and award the cost of arbitration including the fees paid by the Respondent. The Sponsor had filed its reply in the matter. The Court disposed off the petition with leave to the petitioner to file the petition before the appropriate court. Hyderabad Growth Corridor Limited has filed such petition before the District Judge, Commercial Disputes, Hyderabad. The matter is currently pending.

Material Litigation and Regulatory Action against the Associates of the Sponsor/Project Manager

For details in relation to outstanding material litigation and regulatory action against the Project SPVs, see "*– Litigation and Regulatory Action involving the Project SPVs*" on page 704. For details in relation to outstanding material litigation and regulatory action against the members of the Sponsor Group, see "*– Litigation and Regulatory Action involving the Sponsor Group*" on page 704. Details of outstanding material litigation and regulatory action against the other Associates of the Sponsor/Project Manager are set out below.

I. ***Aryan Hospitality Private Limited ("AHPL")***

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against AHPL. Other than as disclosed below, there is no outstanding material civil litigation against AHPL.

Jaykumar Govindrao Nikam and others (the "**Petitioners**") have filed a suit before the Civil Judge, Junior Division at Kolhapur alleging that AHPL has encroached the land owned by the Petitioners. The suit pertains to the plot leased for the IRDP Kolhapur project. The concession agreement in relation to the project was entered into between the Maharashtra State Road Development Corporation (the "**MSRDC**"), IRB Kolhapur Integrated Road Company Private Limited ("**IRB Kolhapur**"), and the Kolhapur Municipal Corporation (the "**KMC**"). Under the concession agreement, land owned by the KMC was leased to IRB Kolhapur for the project pursuant to a lease deed between KMC, MSRDC and IRB Kolhapur. The land was then sub-leased by IRB Kolhapur to AHPL. The IRDP Kolhapur project has been bought back by the government. AHPL has cancelled the sub-lease deed and the possession of the land as well as the structure thereon has been given back to IRB Kolhapur on an "*as is where is*" basis, free from encumbrances. AHPL no longer has any interest in the property. The matter is currently pending.

II. ***Aryan Toll Road Private Limited ("ATRPL")***

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against ATRPL.

III. ***Aryan Infrastructure Investments Private Limited ("AIIPL")***

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against AIIPL.

IV. ***ATR Infrastructure Private Limited ("ATRIPL")***

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against ATRIPL. Other than as disclosed below, there is no outstanding material civil litigation against ATRIPL.

Outstanding Material Civil Litigation

Kishore Dyanoba Shevkari (the "**Petitioner**") has filed a writ petition before the High Court of Bombay against the State of Maharashtra and ATRIPL, among others. The petition relates to the choking of the Hume Pipe Culvert because of garbage dumping. The Petitioner has alleged that the choking of the Hume Pipe Culvert has resulted in waterlogging and that has affected his land. The matter is currently pending.

V. *IRB Ahmedabad Vadodara Super Express Tollway Private Limited ("IRB AVSETPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against IRB AVSETPL. Other than as disclosed below, there is no outstanding material civil litigation or other material litigation against IRB AVSETPL.

Outstanding Material Civil Litigation

1. Shabbirbhai Noormohmmadbhai, the owner of Pragati Hotel, Bareja, Ahmedabad (the "**Petitioner**") has filed a suit before the Additional Civil Court Judge, Ahmedabad against the Director, IRB, Jetalpur, Ahmedabad, the Deputy Engineer, R&B, Ahmedabad, the District Collector, Ahmedabad, and the State Public Works Department, Gandhinagar seeking a permanent stay order on closing his access to the main carriage way. The suit relates to compensation for land acquisition. The matter is currently pending.

2. Jitendra Chandulal Amin, the owner of Rishi Petrol Pump, Nadiad has filed a suit before the Additional Civil Court Judge, Nadiad agaisnt IRB AVSETPL and others seeking a permanent stay order on closing his access to the main carriage way. The suit relates to compensation for land acquisition. The matter is currently pending.

Other Material Litigation

IRB AVSETPL invoked arbitration in relation to a competing road. The NHAI suggested that the matter be brought before the Conciliation Committee of Industrial Experts (the "**CCIE**"). IRB AVSETPL filed a writ petition in the High Court of Bombay, which directed the parties to immediately refer the matter to arbitration. IRB AVSETPL was also granted a waiver with respect to the payment of premium for three months subject to the submission of an undertaking. The CCIE, pursuant to order dated May 29, 2019 concluded that the conciliation had failed. IRB AVSETPL then invoked arbitration in relation to the competing road along with the matter of premium deferment and appointed an arbitrator. The NHAI did not appoint an arbitrator. IRB AVSETPL then filed a writ petition in the High Court of Delhi, pursuant to which the NHAI was directed to form a tribunal. The interim relief granted by the High Court of Bombay was also extended. The NHAI had challenged the order of the High Court of Bombay in a special leave petition before the Supreme Court of India, but the petition was dismissed.

Subsequently, the High Court of Delhi nominated a presiding arbitrator. However, the NHAI filed a special leave petition before the Supreme Court of India challenging such nomination. The Supreme Court of India passed an order appointing a different presiding arbitrator and the arbitral tribunal was constituted. IRB AVSETPL has filed an application for interim relief and a statement of claims on March 1, 2021 requesting the arbitral tribunal to, *inter-alia*, (a) declare that the NHAI is in breach of its obligations and representations under the concession agreement; (b) direct the NHAI to pay compensation of ₹12.64 billion for the period between December 4, 2015 until December 31, 2020 with an interest at 15% per annum until payment or realization from January 1, 2021 until the subsistence of the breach; and (c) pass an order of mandatory injunction directing the NHAI to cure the breach with respect to the competing road. The NHAI has responded to the application for interim relief filed by IRB AVSETPL. The respondent has filed a counter-claim for an amount of (i) ₹562.2 million (until June 30, 2021) towards premium deferment; (ii) ₹5,026.1 million (until May 2021) and unpaid premium during the pendency of the proceedings as well as future premium; and (iii) ₹312.1 million towards interest (as on June 30, 2021) as per the provisions of the supplementary agreement. The parties filed written submissions and the arbitral tribunal framed preliminary issues and conducted hearings. In this regard, the arbitral tribunal passed an interim award dated October 14, 2021 in favour of the claimant. The arbitral tribunal subsequently formulated further issues to be settled pursuant to hearings. The NHAI also filed an application seeking to implead the Government of Gujarat as a party in the proceedings. The NHAI challenged the interim award dated October 14, 2021 before the High Court of Delhi, which was dismissed pursuant to an order dated July 4, 2022. Thereafter, the NHAI filed an appeal against such dismissal. The arbitral tribunal also dismissed the NHAI's application to implead the Government of Gujarat, which was further challenged by NHAI. IRB AVSETPL has filed an affidavit of evidence before the arbitral tribunal and updated the previously claimed amount to ₹21,232.70 million, including interest until September 30, 2022 of ₹91.90 million on margin money and commission paid towards procurement of bank guarantees for ₹210.00 million. The matter is currently pending.

VI. *IRB Goa Tollway Private Limited ("IGTPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against IGTPL. Other than as disclosed below, there is no outstanding material litigation involving IGTPL.

IGTPL had initiated arbitration proceedings against the NHAI for wrongful termination of contract by the NHAI with respect to the Goa/Karnataka to Panaji-Goa section of NH-4A in the State of Goa. The arbitral tribunal had passed an award in favor of IGTPL which allowed the following claims: (i) approximately ₹1,963.80 million towards 50% of the adjusted equity of ₹1,309.20 million arising out of the termination of contract by the NHAI; (ii) an amount of ₹47.10 million for damages on account of a delay in the fulfilment of the conditions of the contract; and (iii) interest on the amounts mentioned above. The aggregate amount involved is ₹3,039.80 million. The NHAI had filed a petition before the High Court of Delhi ("**Court**") for setting aside the award passed by the arbitral tribunal and a stay on the operations of the award. The stay on the Award was not allowed by the Court. IGTPL availed 75% of the arbitral award amount from the NHAI against bank guarantees amounting to ₹2,279.80 million with the NHAI. Further, the Court also directed NHAI to deposit the balance amount with the Court, pending disposal of the case. Accordingly, NHAI has deposited an amount of ₹103.50 million with the Court. Pursuant to an order dated February 21, 2022, the Court upheld the arbitral award in relation to (i) above and corresponding interest, but set aside the claim in relation to (ii) above. Subsequently, both the parties appealed under Section 37 of the Arbitration and Conciliation Act, 1996 against the order of the Delhi High Court, which were both dismissed. Thereafter, NHAI challenged this order before the Supreme Court of India, which was dismissed. IGTPL has filed an application for withdrawal as well as an application for execution of the arbitral award under Section 36 of the Arbitration and Conciliation Act, 1996. The matter is currently pending.

VII. *IRB Infrastructure Private Limited ("IRBIPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against IRBIPL.

VIII. *Ideal Road Builders Private Limited ("Ideal Road Builders")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against Ideal Road Builders. Other than as disclosed below, there is no outstanding material civil litigation against Ideal Road Builders.

Outstanding Material Civil Litigation

1. Shamsuddin Miyalal Mushrif has filed a pulic interest litigation before the High Court of Bombay against the Union of India, Ideal Road Builders and others, to declare that the National Highways Act, 1956 and Rule 3 of National Highways (Collection of Fees by any Person for the Use of Section of National Highways/Permanent Bridge/Temporary/Bridge on National Highway) Rules, 1997 are contrary to and violate of the provisions of the Constitution of India, 1950. The petition also seeks the declaration of Section 7 of the National Highways Act, 1956 and Rules 7 and 11 of the National Highways (Fees for the use of National Highway Section and Permanent Bridge-Public Funded Projects) Rules, 1997 and the MoRTH Notifications dated March 4, 2005 and May 5, 2015 illegal, *ultra vires* and invalid, and to stop collection of toll. This is relation to the Ideal Road Builders Khambatki Ghat project. The project has been completed and handed back to the government. The matter is currently pending.

2. Nitin Sardesai and others have filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, Ideal Road Builders and others, seeking the following: (i) to comply with the provisions of the manual of specifications; (ii) to take traffic census on NH 4 and expressway by electronic census system; (iii) to appoint independent agency to monitor traffic; (iv) to remove advertisements and hoardings; (v) to deposit the toll amount with government; and (vi) discount to local public. The matter relates to the Ideal Road Builders Mumbai-Pune project. The project has been completed and handed back to the government. The matter is currently pending.

3. Nitin Sardesai and others have filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, Ideal Road Builders and others, seeking to quash and set aside a notification dated August 9, 2004 (no. PSP 2000/CR-106(1I) Road-8) and a notification dated September 5, 2006. The following prayers have also been made: (i) to comply with the manual of specifications; (ii) to take traffic census by electronic traffic census system; (iii) to deposit toll amount in separate account of government; (iv) to appoint an independent agency to monitor traffic; and (v) to install advance traffic

mentoring system. The matter relates to the Ideal Road Builders Mumbai-Pune project. The project has been completed and handed back to the government. The matter is currently pending.

4. Shrinivas Anant Ghanekar (the "**Petitioner**") has filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, Ideal Road Builders and others, seeking to quash the toll notification and declare the concession agreement illegal and *ultra vires*. The matter relates to the Ideal Road Builders Thane-Ghodbunder project. The suit has been filed based on erronous information provided to the Petitioner's Right to Information Application by the Maharashtra State Road Transport Corporation, as has been admitted in the reply to the petition. The matter is currently pending.

Other Material Litigation

Ideal Road Builders Private Limited and others (the "**Petitioners**") have filed a writ petition before the High Court of Bombay against the State of Maharshtra to set aside a notification issued by the Government of Maharashtra exempting LMVs and buses of the Maharashtra State Road Transport Corporation from payment of toll taxes at the Thane Ghodbunder project. Compensation is being paid by the Government of Maharashtra to the entity which operates the Thane Ghodbunder project. The matter is currently pending.

IX. *IRB Kolhapur Integrated Road Development Company Private Limited ("IRB Kolhapur")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against IRB Kolhapur. Other than as disclosed below, there is no outstanding material civil litigation against IRB Kolhapur.

Outstanding Material Civil Litigation

1. Jairaj Velyan (the "**Petitioner**") has filed a suit before the Civil Judge, Senior Division, Kolhapur, against the State of Maharashtra and others alleging that road construction has resulted in encroachment . The Petitioner has prayed that the encroachment should be removed and the road should be made available for use of the members of the society. IRB Kolhapur has constructed the project as per the concession agreement on land made available by the Kolhapur Municipal Corporation and the project has been bought back by the government. The matter is currently pending.

X. *IRB MP Expressway Private Limited ("IRB MP") (earlier known as NKT Road and Toll Private Limited)*

Other than as disclosed below, there is no outstanding criminal litigation, material civil litigation or regulatory action against IRB MP.

Outstanding Material Civil Litigation

1. Pravin Wategaonkar and others (the "**Petitioners**") have filed a public interest litigation ("**PIL**") before the High Court of Bombay against Maharashtra State Road Development Corporation ("**MSRDC**"), Comptroller and Auditor General of India ("**CAG**"), Mumbai Pune Expressway Limited ("**MPEL**"), State of Maharashtra and IRB MP seeking an order from the High Court of Bombay, *inter-alia*, to (i) exempt the light motor vehicles from payment of toll on the Mumbai Pune Expressway ("**Expressway**"); (ii) stay the tender process which is underway for the toll collection rights for next ten (10) years on the Expressway; and (iii) declare the toll collection as illegal and restrain MPEL / MSRDC from collecting such toll on the Expressway. The Petitioners have filed civil application in the PIL and prayed that the Honorable High Court to examine the legality and validy of the documents of MSRDC, to register case against the officers of MSRDC involving in preparing the document and direct the toll contractor to deposit in the court entire toll revenue collected on Mumbai Pune Expressway. The matter is currently pending.

2. Milind Ashok Achyut and others have filed a public interest litigation before the High Court of Bombay against the Ministry of Road Transport amd Highways, IRB MP and others seeking an order from the High Court of Bombay, *inter-alia*, to (i) declare the establishment of the Somatane toll plaza (the "**Toll Plaza**") on NH-48 belonging to IRB MP as *ultra vires* the National Highways Fee (Determination of Rates and Collection) Rules, 2008 and arbitrary and illegal; (ii) restrain IRB MP from collecting toll on the Toll Plaza on NH-48 until applicable discounts are displayed and changes made in the FASTag mechanism; (iii) direct IRB MP to deposit the toll fees in an escrow account; and (iv) shift the Toll Plaza

in the direction of Pune City. The matter is currently pending.

3. Anil Bhangare and others have filed a public interest litigation before the High Court of Bombay against IRB MP and others seeking an order from the High Court of Bombay to, *inter-alia*, (i) set up a special investigation team to conduct an enquiry into the circumstances under which the Somatane toll plaza (the "**Toll Plaza**") was set up; (ii) remove the Toll Plaza and relocate it; (iii) to make separate lanes for locals and exempt them from toll fees; and (iv) grant a temporary injunction restraining IRB MP from the recovery of toll fees at the Toll Plaza. The matter is currently pending.

Outstanding Criminal Litigation

Anil Bhangare and others (the "**Petitioners**") have filed an original petition against IRB MP and others before the Judicial Magistrate First Class, Vadgaon Maval ("**JMFC**"), stating that the toll receipts at the Somatane toll plaza specify the place of tolling as Dehu Road, which is located at a different location from the Somatane toll plaza. It has been submitted that the toll collected by IRB MP is illegal. The proceedings were stayed by the JMFC due to the pendency of a separate public interest litigation before the High Court of Bombay. The Petitioners have filed an appeal before the Sessions Court, Vadgaon Maval praying, *inter-alia*, that the order passed by the JMFC be set aside and to direct the JMFC to try the matter in accordance with the Code of Criminal Procedure, 1973. The matter is currently pending.

Outstanding Regulatory Action

The Collector of Stamps, Solapur has raised a demand for a deficit in stamp duty of ₹323,000 and a penalty, on the agreement dated November 28, 2001. In its letter dated July 3, 2015, IRB MP informed the Collector of Stamps that such stamp duty is not applicable to the agreement as the section referred to by the Collector of Stamps was not in existence at the time of execution of the agreement. There has been no further response from the Collector of Stamps.

XI. *IRB Sindhudurg Airport Private Limited ("IRB Sindhudurg")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving IRB Sindhudurg. Other than as disclosed below, there is no outstanding material civil litigation against IRB Sindhudurg.

Vijay Krishnaji Rane (the "**Petitioner**") has filed a suit before the Civil Court, Oras, Sindhudurg against IRB Sindhudurg and others (the "**Respondents**") praying for the following reliefs: (i) that the Respondents be prevented from creating obstacles on the suit property; and (ii) that the Respondents be prevented from cutting trees and fruits in the suit property. The Petitioner has also prayed that in the event that it is found that the Respondents are encroaching on the suit property, then the possession of the suit property should be given to him.

XII. *Mhaiskar Infrastructure Private Limited ("MIPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation against MIPL. Other than as disclosed below, there is no outstanding material civil litigation or regulatory action against MIPL.

Outstanding Material Civil Litigation

1. Nitin Sardesai and others have filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, MIPL, Ideal Road Builders, and others, seeking compliance with certain specifications. For details, see " *– Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager – Material Litigation and Regulatory Action against the Associates of the Sponsor – Ideal Road Builders Private Limited*" on page 699.

2. Nitin Sardesai and others have filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, MIPL, Ideal Road Builders Private Limited, and others seeking to quash certain notifications. For details, see " *– Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager – Material Litigation and Regulatory Action against the Associates of the Sponsor/Project Manager – Ideal Road Builders Private Limited*" on page 699.

3. The Shree Ganesh Cooperative Housing Society, through Mr. Shrikrishna Parshuram Joshi and others (the "**Petitioner**") has filed a suit before the Court of the Civil Judge, Senior Division, Pune against MIPL and others challenging the encroachment removal notice issued by Maharashtra State Road Development Corporation on the basis of a survey conducted by MIPL. The 15 year concession period in relation to the project has been completed and the project has been handed back to the government. The matter is currently pending.

4. Pravin Wategaonkar and others have filed a public interest litigation before the High Court of Bombay against the Maharashtra State Road Development Corporation and others allegeing that MIPL is collecting excess toll on the Mumbai-Pune Expressway. The 15 year concession period in relation to the project has been completed and the project has been handed back to the government. The matter is currently pending.

5. The Depurty Inspector General of Registration and Deputy Controller of Stamps and Collector of Stamps, Mumbai Division, Mumbai ("**Authority**"), passed an order dated March 12, 2008 (the "**Order**") against MIPL demanding a payment of ₹275.40 million as deficit stamp duty and a penalty of ₹49.57 million in relation to an the agreement dated August 4, 2004 executed among MSRDC, Ideal Road Builders and MIPL for construction on the Mumbai-Pune Expressway. MIPL filed a writ petition before the High Court of Bombay challenging the Order. Pursuant to an order dated April 28, 2008, the High Court of Bombay provided interim relief to MIPL and directed it to deposit 50% of the claimed amount. MIPL subsequently deposited ₹137.70 million with the Authority. The matter is currently pending.

Outstanding Regulatory Action

The Collector of Stamps, Andheri, Maharashtra sent a notice to MIPL demanding that stamp duty of ₹1,500,000 a penalty of ₹5,340,000 be paid on the agreement dated August 4, 2004 for the Mumbai Pune project. MIPL has replied to the notice, and has not received any response from the Collector of Stamps.

XIII. *MRM Mining Private Limited ("MRMMPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action involving MRMMPL.

XIV. *Modern Road Makers Private Limited ("MRM")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against MRM. Other than as disclosed below, there is no outstanding material civil litigation against MRM.

1. Arjun Rama Ghatal has filed complaint before the office of the Tahasildar and the Executive Magistrate, Palghar against MRM and others regarding the payment of land cess and seeking compensation for possession of land and damage to crops caused by the installation of a tar plant machine. The matter is currently pending.

XV. *Thane Ghodbunder Toll Road Private Limited ("TGRPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against TGRPL. Other than as disclosed below, there is no material civil litigation against or other material litigation involving TGRPL.

Outstanding Material Civil Litigation

Shrinivas Anant Ghanekar has filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, Ideal Road Builders Private Limited, TGRPL, and others. For details, see " – *Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager – Material Litigation and Regulatory Action against the Associates of the Sponsor/Project Manager – Ideal Road Builders*" on page 699.

Other Material Litigation

Ideal Road Builders Private Limited, TGRPL and others have filed a writ petition before the High Court of Bombay against the State of Maharashtra. For details, see " – *Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager – Material Litigation and Regulatory Action against the Associates of the Sponsor/Project Manager – Ideal Road Builders – Other Material Litigation*" on page 700.

XVI. *VCR Toll Services Private Limited ("VCR")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against VCR. As at the date of this Letter of Offer, there is no outstanding material civil litigation against VCR. Other than as disclosed below, there is no material litigation against VCR.

Other Material Litigation

VCR has filed a writ petition before the High Court of Bombay against the Executive Engineer, Public Works Department, and others, challenging an action of the Government which has prevented them from collecting the toll based on an allegation that they have not carried out repairs to the project road. The matter is currently pending.

XVII. *Pathankot Mandi Highway Private Limited ("PMHPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against PMHPL.

XVIII. *Meerut Budaun Expressway Limited ("MBEL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against MBEL.

XIX. *VM7 Expressway Limited ("VM7")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against VM7.

XX. *GE1 Expressway Private Limited ("GE1")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against GE1.

XXI. *Chittoor Thachur Highway Private Limited ("CTHPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against CTHPL.

XXII. *IRB PS Highway Private Limited ("IPHPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against IPHPL.

XXIII. *VDM Ventures Private Limited ("VVPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against VVPL.

XXIV. *Deux Farming Films Private Limited ("DFFPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against DFFPL.

XXV. *IRB Charitable Foundation ("IRBCF")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against IRBCF.

Material Litigation and Regulatory Action against the Sponsor Group

As at the date of this Letter of Offer, there is no outstanding material civil litigation, criminal litigation, regulatory action or other material litigation against the members of the Sponsor Group. For details in relation to outstanding material litigation and regulatory action against the Sponsor, see "*– Litigation and Regulatory Action involving the Sponsor/Project Manager*" on page 696.

Material Litigation and Regulatory Action involving the Project SPVs

A. *AETL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory litigation involving AETL. Other than as disclosed below, there is no outstanding material civil litigation involving AETL.

Outstanding Material Civil Litigation

1. Hakim Singh Yadav and others (the "**Petitioners**") have filed a writ petition before the High Court of Allahabad against the Sponsor and others (the "**Respondents**") in relation to the drainage system for the road asset operated by AETL. For details, see "*– Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager - Material Litigation and Regulatory Action against the Sponsor/Project Manager - Outstanding Material Civil Litigation*" on page 696.

2. AETL has filed for settlement through conciliation with the NHAI in relation to a dispute with respect to the payment of premium with proportionate reduction of revenue losses on account of COVID-19 and delay in completion of construction. AETL and the NHAI did not reach any settlement, and accordingly, AETL invoked arbitration proceedings against the NHAI under the terms of its concession agreement and submitted claims for amounts aggregating to ₹13,179.8 million towards, *inter alia*, compensation for delay in completion of construction due to the reasons attributable to NHAI, proportionate reduction in payment of premium, compensation on account of various force majeure costs, etc. along with aggregated extension of the concession period by 351.41 days. The matter is currently pending.

B. *CGTL*

As at the date of this Letter of Offer, there is no outstanding regulatory action involving CGTL. Other than as disclosed below, there is no outstanding material civil litigation or criminal litigation involving CGTL.

Outstanding Material Civil Litigation

CGTL, KGTL and UTL have filed a writ petition before the High Court of Rajasthan, Jaipur Bench against Union of India and NHAI challenging certain notifications and seeking interim relief from the High Court of Rajasthan, Jaipur Bench. For details, see " *– Material Litigation and Regulatory Action involving the Project SPVs – UTL – Outstanding Material Civil Litigation*" on page 706.

Outstanding Criminal Litigation

1. Mr. Waman Rathod, deputy general toll manager at a toll plaza located on the road asset operated by CGTL, has filed two first information reports at the Police Station, Gangrar, Chittorgarh, Rajasthan in relation to (i) the misbehaviour of certain individuals when asked to pay toll; and (ii) the theft of ₹0.62 million from the cash room at the toll plaza. The matters are currently pending.

2. Mr. Rohit Sharma, a supervisor at at a toll plaza located on the road asset operated by CGTL, has filed a first information report at the Raila Police Station, Bhilwara, Rajasthan against the driver of a truck-trailer in relation to a collision with the toll booth and injuries caused to the supervisor. The matter is currently pending.

C. *IRB HMTL*

As at the date of this Letter of Offer, there is no outstanding material civil litigation, criminal litigation, regulatory action or other material litigation involving IRB HMTL.

D. *IRB WTL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving IRB WTL. Other than as disclosed below, there is no outstanding material civil litigation involving IRB WTL.

1. Mr. Laxman Neelakantha Desai (the "**Petitioner**") has filed a petition against IRB WTL (the "**Respondent**") before the court of Civil Judge Karwar alleging that the blasting of rocks done by the Respondent has caused damage to the property of the Petitioner. The Petitioner has requested a permanent injunction restraining the Respondent from undertaking such activity. The court had passed an order granting a temporary injunction against the Respondent. Subsequently, the parties entered into a mediation agreement, pursuant to which the court passed an order dated April 28, 2017, vacating the earlier injunction. The matter is currently pending.

2. Mr. Vithobha Ganesh Naik (the "**Petitioner**") has filed a suit against IRB WTL before the Principal Judge at Karwar, alleging that IRB WTL is encroaching upon the Petitioner's land to construct the highway. IRB WTL has received summons from the court. The matter is currently pending.

E. *KGTL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving KGTL. Other than as disclosed below, there is no outstanding material civil litigation involving KGTL.

CGTL, KGTL and UTL have filed a writ petition before the High Court of Rajasthan, Jaipur Bench against Union of India and NHAI challenging certain notifications and seeking interim relief from the High Court of Rajasthan, Jaipur Bench. For details, see " – *Material Litigation and Regulatory Action involving the Project SPVs – UTL – Outstanding Material Civil Litigation*" on page 706.

F. *KTL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation involving KTL. Other than as disclosed below, there is no outstanding material civil litigation or regulatory action involving KTL.

Outstanding Material Civil Litigation

1. KTL has invoked arbitration against the NHAI under the terms of its concession agreement in relation to an aggregate amount of approximately INR 2,880.7 million and extension of concession period by 582.77 days on grounds of, *inter alia,* compensation for delay in completion of construction for the reasons attributable to the NHAI, balance amount in connection with the indirect political force majeure, *i.e.* toll stoppage due to the farmer protests in 2020-2021 and political force majeure costs on account of restrictions imposed due to the COVID-19 pandemic. The matter is currently pending.

Outstanding Regulatory Action

The District Town Planner, Jind (exercising the power of Director, Town and Country Planning, Haryana) (the "**District Town Planner**") issued a notice under the Punjab Scheduled Roads and Controlled Area Restriction of Unregulated Development Act, 1963 ("**Punjab Act**") to the general manager of the toll plaza located at village Badowal, Tehsil Narwama, District Jind, stating that the construction of the toll plaza and other commercial and official building on NH-52 Narwana to Uklana was unauthorized since the construction was on land which has been notified as a controlled area under the Punjab Act. The notice also, *inter-alia,* directed the stoppage of any further construction on the land. KTL responded to the notice requesting the District Town Planner to withdraw the notice, stating that the collection of toll and the construction of the toll plaza were in accordance with the concession agreement, toll notifications and specifications approved by an independent engineer on land acquired by the NHAI. The matter is currently pending.

G. *SYTL*

As at the date of this Letter of Offer, there is no outstanding material civil litigation or criminal litigation involving SYTL. Other than as disclosed below, there is no outstanding regulatory action involving SYTL.

Outstanding Regulatory Action

SYTL approached the NHAI for amicable settlement of claims in relation to delays attributable to the NHAI during the construction of the project. The claims were for an amount of approximately ₹7,905.3 million and an extension of the concession period by 647.43 days. Since the parties were unable to reach a settlement, SYTL has invoked arbitration under its concession agreement. The matter is currently pending.

H. ***UTL***

As at the date of this Letter of Offer, there is no regulatory action involving UTL. Other than as disclosed below, there is no outstanding material civil litigation and outstanding criminal litigation involving UTL.

Outstanding Material Civil Litigation

CGTL, KGTL and UTL (the "**Petitioners**") have filed a writ petition before the High Court of Rajasthan, Jaipur Bench against Union of India and NHAI (the "**Respondents**") stating that on account of COVID-19 and the subsequent national lockdown, the Petitioners submitted claim for reimbursement of losses and consequent extension of the concession period which shall be computed every month until the toll collection stabilizes to more than 90% of the average daily fee as defined under the concession agreements. Further, under the terms of the concession agreements, the Petitioners are obligated to start premium payment to the NHAI upon the third anniversary of appointed date whereas the schedule completion date was contracted as two and a half year after the appointed date. Hence, once the construction is completed in two and a half year, toll rates would have been revised and only after six months of such revision of toll rates would the Petitioners have to start the premium payment. The Petitioners have stated the scheduled completion date was revised by the NHAI, primarily due to reasons attributable to them and the revised date of completion was revised to November 30, 2020, January 31, 2021 and September 9, 2021 applicable to the Petitioners. However, NHAI addressed a letter to UTL instructing them to commence the premium payment as per the scheduled stipulated under the concession agreements.

Hence, the Petitioners have challenged, *inter-alia*, (i) sub-rule (9) of rule 4, *i.e.*, "Base rate of fee" of the National Highways Fee (Determination of Rates and Collection) Rules, 2008 as it limits the rate of fee applicable for a section of a four lane highway under upgradation to six laning during the construction period; and (ii) office memorandum dated May 18, 2020 issued by the Central Government and consequent policy guidelines / BOT (Toll) / 2020 dated May 26, 2020 issued by the NHAI and sought an interim relief to maintain the same time gap of six months between the date of revised completion date / toll tariff revision and date of commencement of payment of premium, under the respective concession agreements and issue an appropriate writ directing the NHAI (i) to not take coercive action against the Petitioners; (ii) to grant compensation to the Petitioners due to losses on account of COVID-19; and (iii) to grant an extension to the concession period. Pursuant to an interim order dated September 18, 2020, the High Court of Rajasthan, Jaipur bench, ordered a stay on the operation of Clause 26.2.1 of the model concession agreement.

The judgment along with the rectification order was pronounced by the High Court of Rajasthan on August 25, 2021 and August 26, 2021 respectively. As per direction of the said judgment, CGTL, KGTL and UTL filed undertakings on August 31, 2021. As interim relief, the High Court of Rajasthan gave interim protection to the Petitioners against payment of premium for a period of three months and directed the parties to go for arbitration. Subsequently, CGTL, KGTL and UTL filed petitions before the Delhi High Court praying for extension of relief granted by the High Court of Rajasthan. The order in relation to appointment of the arbitrator passed on November 28, 2021 by the Delhi High Court was challenged by CGTL, KGTL and UTL through a Special Leave Petition filed in the Supreme Court. The Supreme Court has appointed a presiding arbitrator pursuant to an order dated February 7, 2022.

The Delhi High Court passed an order dated November 9, 2021 in relation to interim relief and CGTL, KGTL and UTL filed an appeal against this order before the division bench of the Delhi High Court. The division bench disposed of the appeal in favour of CGTL, KGTL and UTL with the direction that the Delhi High Court holds the sole jurisdiction to hear the petition on interim relief and accordingly, hearings may be commenced before the Delhi High Court. The Delhi High Court has directed that the orders dated August 25, 2021 and August 26, 2021 passed by the Rajasthan High Court, will remain in operation. Pursuant to a judgement dated March 16, 2022, the Delhi High Court has held that the interim order will continue until an application under Section 17 of the

Arbitration and Conciliation Act, 1996 is filed by the parties before the arbitral tribunal and taken up for hearing. The arbitral tribunal has been constituted. CGTL, KGTL and UTL filed claims for an amount of approximately ₹5,021.2 million, ₹8,689.6 million and ₹9,060.8 million, respectively and an extension of the concession period by 241.37 days, 387.18 days and 214.99 days, respectively. The Arbitral Tribunal had pronounced Section 17 order on September 10, 2023 in favour of the claimants by further extending the interim relief granted by the Delhi High Court, pending adjudication of the main dispute. The arbitration matter is currently pending. The matter is currently pending.

Outstanding Criminal Action

Hiteshkumar Ramanlal Gandhi, a shift in-charge working at the Kherwara-Khandi Obri toll plaza, filed a first information report at the Kherwara police station, Udaipur against Bhairulal Salvi, a bus driver who refused the pay toll at the toll plaza. When the people working at the toll plaza tried to stop him, the bus driver along with others misbehaved with the workers and destroyed equipment at the toll plaza resulting in the loss of about ₹0.80 million to ₹1.00 million. The matter is currently pending.

I. *YATL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving YATL. Other than as disclosed below, there is no outstanding material civil litigation or regulatory action involving YATL.

Outstanding Material Civil Litigation

1. Mr. Shaikh Rafiq and others (the "**Petitioners**") filed a writ petition against the Sponsor, Modern Road Makers Private Limited and others (the "**Respondents**") before the BHC Aurangaba**d** in relation to acquisition of land for the four laning of Yedshi – Aurangabad road that forms a part of the Solapur – Aurangabad highway, *i.e.*, NH 211. The Petitioners alleged that certain of the Respondents tried to change the alignment of the land already acquired for the project to include additional land in order to protect interest of one of the Respondent which is illegal. The Sponsor filed its response to the petition filed by the Petitioners and *inter-alia* stated that (i) the correct party to be impleaded in the petition is YATL and not itself as YATL is responsible for the operations under the concession agreement and therefore the petition should be dismissed on account of misjoinder and non joinder of necessary parties; and (ii) acquisition of land is the responsibility of the NHAI and hence, no cause of action lies against itself. The matter is currently pending.

2. Mr. Panditrao Digambarrao Shete Chausalkar and another (the "**Petitioners**") filed a writ petition against the Sponsor and others (the "**Respondents**") before the BHC Aurangabad in relation to acquisition of land for the four laning of Yedshi – Aurangabad road that forms a part of the Solapur – Aurangabad highway, i.e., NH 211. The Petitioners have alleged that an award was passed acquiring land of the Petitioners without following the due procedure of law and the acquisition of the land of the Petitioners is illegal. The Petitioners requested the BHC Aurangabad to set aside the award for acquisition of the lands of the Petitioner and that the Respondents should be restrained from acquiring such land. The matter is currently pending.

3. Mr. Pruthviraj Shahane (the "**Petitioner**") filed a civil suit against the Sponsor and others (the "**Respondents**") before the Civil Judge (Senior Division), Beed, alleging that the Respondents encroached upon its land by erecting electric polls over them instead of erecting them over land which has been acquired for the project. The Petitioner has, *inter-alia*, requested the court to grant a decree of perpetual and mandatory injunction against the Respondents. The matter is currently pending.

J. *PDTPL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving PDTPL. Other than as disclosed below, there is no outstanding material civil litigation involving PDTPL.

Material civil litigation

Sanat Ghosh & others (the "**Petitioners**") have filed a public interest litigation petition against the Sponsor and PDTPL before the High Court of Calcutta alleging water logging in certain villages due to the project operated by

PDTPL. The Petitioners have prayed, *inter-alia*, that the hume pipes located in and around the lands owned by the Petitioners be changed into culverts. The matter is currently pending.

K. *IRB GEPL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving IRB GEPL. Other than as disclosed below, there is no outstanding material civil litigation involving IRB GEPL.

Material civil litigation

1. Kanugula Mahesh Kumar ("**Petitioner**") has filed a petition for a public interest litigation before the High Court of Telangana (the "**High Court**") against the State of Hyderabad, the HMDA, the HGCL, the Sponsor and IRB GEPL, seeking to aside the award of the Toll, Operate and Transfer ("**TOT**") tender for the Nehru Outer Ring Road project (the "**IRB GEPL Project**") to the Sponsor and IRB GEPL, alleging, *inter-alia,* failure to disclose the initial estimated concession value for the project and diversion of funds from the concessioning authority. The Petitioner has also sought quashing or setting aside of the concession agreement and all other agreements entered into by the State of Telangana, the HMDA and the HGCL with the Sponsor and IRB GEPL in relation to the IRB GEPL Project. The Petitioner has also sought an order directing the Sponsor and IRB GEPL not to transfer the bid concession fee of ₹7,380 crore to the HMDA or alternatively, not to transfer any funds from the bid concession fee of ₹7,380 crore to the State of Telangana. The matter is currently pending.

L. *STPL*

As at the date of this Letter of Offer, there is no outstanding material civil litigation, criminal litigation or regulatory action involving STPL.

M. *IRB LTPL*

As at the date of this Letter of Offer, there is no outstanding material civil litigation, criminal litigation or regulatory action involving IRB LTPL.

N. *IRB KTPL*

As at the date of this Letter of Offer, there is no outstanding material civil litigation, criminal litigation or regulatory action involving IRB KTPL.

O. *IRB GTPL*

As at the date of this Letter of Offer, there is no outstanding material civil litigation, criminal litigation or regulatory action involving IRB GTPL.

III. Material Litigation and Regulatory Action against the Investment Manager and Associates of the Investment Manager

Material Litigation and Regulatory Action against the Investment Manager

As at the date of this Letter of Offer, there is no outstanding material civil litigation or criminal litigation against the Investment Manager. Other than as disclosed below, there is no outstanding regulatory action against or other material litigation involving the Investment Manager.

Outstanding Regulatory Action

The Collector of Stamps, Solapur sent a demand notice dated April 24, 2015 to the Investment Manager demanding a sum of ₹152,000 as deficit stamp duty and a penalty of ₹3,040 on the agreement dated May 29, 2002 executed between the Maharashtra State Road Development Corporation, Ideal Road Builders and the Investment Manager. The Investment Manager filed a reply denying the payment of deficit stamp duty on the grounds that (a) the demand of deficit amount of stamp duty was made payable by citing the provisions included in Section 63 of the Bombay Stamp Act, 1958 inserted vide amendment 12 of 2006 (effective from May 1, 2006) whereas the agreement was already executed prior to the amendment; and (b) Section 63 of the Bombay Stamp Act, 1958 does not have a retrospective effect. In its letter dated July 7, 2015, the Collector of Stamps issued a direction that the Investment Manager and Ideal Road Builders must pay the deficit stamp duty and the penalty within seven days, failing which recovery action for the said amount would be initiated as per the Maharashtra Land Revenue Code, 1966 and the toll would be sealed. No further communication has been received from the Collector of Stamps Solapur in this regard.

Material Litigation and Regulatory Action against the Associates of the Investment Manager

For details of material litigation and regulatory action against the associates of the Investment Manager, see " – *Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager*" on page 696.

IV. Material Litigation and Regulatory Action against the Trustee

Outstanding Material Litigation

1. **SBICAP Trustee & Ors Vs. ITSL & Ors.- O.S.No. 25877/2013**

   Brief Background

   SBI Cap Trustee (the "**Plaintiff**") had filed a suit before the City Civil Court, Bangalore against the Trustee and others (the "**Defendants**") requiring sale of pledged shares for a particular price by SREI Fund/Investors, for whom the Trustee was acting as the share pledge trustee. India Competitive Global Fund (ICGC) acting through the SREI Investment Manager had a First & Exclusive Charge over the Pledged shares. At the instructions of the ICGC & SREI Investment Manager had transferred the Pledged shares to their demat account as they have First & Exclusive right over the shares. ITSL as share pledge trustee has acted on the instructions of the lenders/investors. ICGC/SREI sold the shares and appropriated the amounts towards their dues and transferred the surplus amount to the Plaintiff. The Plaintiff is acting for a consortium of lenders and has residual interest. The Plaintiff's case is that the ICGC/SREI has appropriated more amount than their dues. The aggregate claim amount is Rs. 1,550.3 million. The branch manager of SBI along with their counsel submitted to the court that they are willing to explore settlement. The court referred the matter for pre-conciliation efforts. In the afternoon session, our advocate appeared before the conciliator. Advocate briefly explained the dispute to the conciliator. The Plaintiff informed the conciliator that if Trinity provides the details of the loan transaction and a statement of accounts in relation to the same, this information would help them resolve the dispute quickly. The case was listed on 30.09.2021 for further conciliation. As no representative was present on behalf of the company, the court has recorded that there is no settlement between the parties. The case was adjourned to October 27, 2021 for the parties to proceed with the litigation. The case is now revolving around the proving of the dues by ICGC/SREI and appropriation of amounts. ITSL had no role in sale of shares, maintenance of books of accounts and appropriation of amounts and transfer of surplus amount. The matter was adjourned to 16.11.2021 for framing of Issues, 23.11.2021 for filing of list of witnesses ICGC, SREI & ITSL, for filing of affidavit of evidence by SBI, 07.12.2021 for cross examination of witnesses of SBI, 14.12.2021 for filing of affidavit of evidence by ICGC/SREI /Trinity/ITSL and 21.12.2021 for cross examination of witnesses of Trinity and ITSL and 07.01.2022 for further orders. ITSL has filed an application under Order 1 Rule 10(2) read with Section 151 of the Code of Civil Procedure, 1908 for unsuiting ITSL from the suit and for deleting the name of ITSL from the array of the parties. The matter is now listed on 30.06.2022 for arguments on the application of ITSL for deleting the name of ITSL from the array of the parties. ITSL has no role in sale of shares & appropriation of sale proceeds. The Plaintiff appeared and filed the amended plaint and copies of the documents in two volumes (volume I consisting of 410 pages and volume II consisting of 598 pages). The learned judge upon examining the volumes observed that the Plaintiff had not filed the statement of truth. Therefore, the Learned Judge adjourned the matter for filing the statement of truth and additional written statement, if any. ITSL has filed its additional written statement on 12th August, 2022. The matter adjourned to 25th January, 2023 for the reply arguments by the Defendants 2 & 3. The main contention taken by the Plaintiff's advocate while arguing on interim application (IAs) is that they are entitled for complete residual dues which Defendant No 2 & 3 have received while selling the pledged shares. Plaintiff's IAs dismissed as not survived for consideration. Now the matter is posted on 08th December, 2023.

Current Updates – a) The matter has been Stayed by the order of the Hon'ble High Court of Karnataka and the stay is extended.

b) on 15/02/2024, the case was called out in open Court. Advocate for defendant no.1 present and filed memo stating that, 6 months has expired from the date of interim order on 14.02.2024. Advocate for plaintiff present and filed memo along with case status of W.P.no.17774/2023. Await orders. Call on 18.03.2024.

2. Brief Background

On 10.09.2021, the Competition Commission of India (CCI) received an information from Muthoot Finance Limited (Informant) against Trustees Association of India (TAI) and three of its members, i.e., IDBI Trusteeship Services Limited, Axis Trustee Services Limited, and SBI CAP Trustee Company Limited (collectively referred to as 'OPs') for alleged contravention of Sections 3(3) and 4 of the Competition Act, 2002 (Competition Act) (hereinafter referred to as the 'Information'). i.e. for entering into anti-competitive agreement and formation of Cartel. CCI.

The CCI has passed an order dated 23.12.2021 under Section 26(1) of the Competition Act, 2002 (Competition Act) directing the Director General to investigate the conduct of Trustees' Association of India's (TAI), IDBI Trusteeship Services Limited (IDBI), Axis Trustee Services Limited and SBICAP Trustee Company (together referred to as the 'OPs') and its office bearers for *prima facie* violating Section 3(1) read with Section 3(3) of the Competition Act (Prima Facie Order) dealing with anti-competitive horizontal agreement (including cartel).

TAI, ITSL, Axis Trustee & SBICAP Trustee filed Civil Writ Petition Nos. 3781 of 2022, 3791 of 2022, 3842 of 2022 and 3847 of 2022 respectively before Bombay High Court challenging the jurisdiction of CCI as the SEBI as Sectoral Regulator has Jurisdiction to decide the matter. The matter has been adjourned to 15th February, 2023 for hearing on Application by CCI for vacation of Stay.

At the hearing held on 21st February,2023, the Bombay High Court directed CCI to first decide the jurisdictional issue, leaving all other contentions open. Matter to go before CCI.

Current Status:- The matter was listed before the Competition Commission of India (CCI) on13.12.2023 for hearing. After hearing both the parties, the CCI concluded that the parties are at liberty to file additional submissions (if any) on any additional points within one week. Additional written submissions have been filed on 21/12/2023. CCI Order is awaited.

3. R.K. Mohata Family Trust Vs. ITSL & Ors.

Brief Background

One Mr .R.K.Mohata Family Trust has filed Commercial Suit (lodging) No. 27568 of 2021 before Bombay High Court against ITSL & RHFL praying for holding of meeting of debenture holders of RHFL as also damages of Rs.1,05,50,902 against ITSL towards his investment. Hon'ble Bombay High Court vide their orders dated the 31.03.2022 read with the order dated the 06.04.2022 and the order dated the 10.05.2022 directed ITSL to hold the meeting of debenture holders. ITSL convened a meeting of the debenture holders on 13.05.2022 and as directed by Hon'ble Bombay High Court and the results of the voting of meeting have been placed before the Hon'ble Bombay High Court in sealed cover. The matter is *sub-judice* before the Hon'ble Bombay High Court. Authum (AIIL) filed an appeal before the Hon'ble Supreme Court against the order of BHC. The matter was listed for hearing on 31st January, 2023. The matter was part heard and thereafter adjourned.

Current Status

Arising out of SLP© No. 411 of 2023 filed by Authum Investments & Infrastructure Ltd. (AIIL) vs. R.K. Mohtta Family Trust & Ors, Supreme Court vide their Order dated the 3rd March,2023 allowed the Resolution Plan filed by AIIL and directed AIIL to make the payments prior to 31st March, 2023. AIIL has made the payment.

4. SCR 109885 – 1/394/14 - J Patel & 68 Others (All investors of Dynamic India Fund III) vs. Dynamic India Fund III, International Financial Services, ICICI Venture Funds Management Company Limited, ICICI Bank and ITSL , before Supreme Court of Mauritius

Brief Background

Suit is filed by investors seeking compensation and damages of Rs. USD 103,699,976 for the loss of their investments in Dynamic India Fund III from Dynamic India Fund III, International Financial Services, ICICI Venture Funds Management Company Limited, ICICI Bank and ITSL.

All the defendants including ICICI Venture have raised preliminary objections to the suit.

DIF III has raised five preliminary objections to the suit viz. (i) plaintiffs have been wrongly styled; (ii) suit is a disguised derivative action and the appropriate court to hear it is the commercial court and not the civil court; (iii) there is a connected stay application filed before the commercial court by DIF III that the suit has to be stayed as the suit is a class action suit and hence the commercial court and not the civil court has the jurisdiction to hear the suit; (iv) the Plaintiffs should have put the other shareholders of DIF III into cause; and (v) the plaintiffs have to provide security for costs to all the defendants.

The other defendants have raised preliminary objections with respect to privity of contract and jurisdiction of Mauritius courts.

Nearly 6 years after the Suit was filed in 2014 in Mauritius, on January 28, 2020, the court heard arguments on only two of the preliminary objections raised by ICICI Bank and ICICI Venture viz. (a) Mauritius court lacks jurisdiction to hear disputes between non-Mauritians (both the plaintiffs and the defendants No. 3 and 4 i.e. ICICI Bank and ICICI Venture are not Mauritius residents); and (b) Mauritius court is not the convenient forum to hear the disputes raised.

The arguments relied, amongst others, related to the facts that (a) alleged conduct of ICICI Bank and ICICI Venture did not admittedly happen in Mauritius and offences, if any, happened in India; (b) investments were in real estate projects in India; (c) investments were in a real estate fund in India; and (d) Indian law governs the contractual relationship between the parties.

By an order dated June 9, 2020 the Supreme Court of Mauritius stayed the proceedings as against ICICI Bank and ICICI Venture on the grounds that none of the allegations made against ICICI Bank and ICICI Venture occurred in Mauritius and hence the courts in Mauritius lack jurisdiction to adjudicate such allegations. In the subsequent hearing on July 1, 2020, the Plaintiffs informed the court of their decision not to appeal against the order staying the proceedings as against ICICI Venture and ICICI Bank. The proceedings would continue against the other Defendants viz. DIF III, IFS and the Trustee.

The Supreme Court of Mauritius vide its order dated the 3rd June, 2022 have deleted ICICI Bank and ICICI Venture Fund Management Company Ltd. from the array of the parties allowed to continue the case against Dynamic India Fund III, SANE Mauritius and the WITECO now ITSL.

The plaintiffs have filed an appeal against the said Judgement dated the 3rd June,2022 passed by The Supreme Court of Mauritius.

ICICI Venture Fund Management Company Ltd. is taking care of the matter on behalf of ITSL as a Trustee and also appointed Counsels to defend ITSL. We have taken up the matter with the ICICI Venture stating that WITECO now ITSL is also not a Mauritius resident and Mauritius court is not the convenient forum to hear the disputes raised and hence lacks the jurisdiction. Further, ITSL is acting only as a trustee and there cannot be any claim against ITSL at all as ICICI Venture Fund Management Company Ltd. was Investment Manager of the Fund who has managed all affairs of the Fund.

Current Update

Hearing for the appeal filed by the plaintiffs, against the order dated June 03, 2022 was scheduled on May 18, 2023. The matter has now been fixed for Merits on May 13, 2024 before the Supreme Court.

5. **Pawan Kapoor & Anr. Vs. SEBI & Ors.(Karvy Data Management Services Ltd)**

Brief Background

In the case of Karvy Data Management Services Ltd ; one Pawan Kapoor & Amri Resorts Pvt. Ltd. the debenture holders have filed writ petition before Delhi High Court, inter alia against ITSL alleging various non compliances by ITSL and for not initiating action against Karvy Data Management Services Ltd. for defaults in payment of interest & Principal. The matter was listed before Hon'ble Delhi High Court on 19.12.2022. The Hon'ble Delhi High Court has directed Ministry of Corporate affairs to investigate in the complaint and provide report.

Current Update.

The matter was listed on 05/02/2024 for early hearing. The petitioner had filled an application being CM. Appl. 62768/2023 for early hearing which was listed for hearing on 05.12.2023 before HMJ Subramonium Prasad, as Item No. 48 (Supplementary List), in Court No. 7, Delhi High Court. The Hon'ble Court after hearing the parties was not of the opinion to entertain the application filed by the applicant/petitioner, since, no case of urgent hearing was made out. Accordingly, the said application for early hearing was dismissed and the court directed the matter to be listed on the date already fixed i.e. 05.02.2024.

Pursuant to the order dated 19/12/2023 passed by Delhi High Court, MCA has launched inspection of ITSL vide letter dated the 19th December,2023. We have provided the data to Regional Director (RD), MCA, Western Region, Mumbai on 1st January, 2024. RD had called us for personal hearing on 04/01/2024. RD has issued a letter dated 8th January,2024 calling information. ITSL vide its letter dated the 24th January,2024 provided all documents together with supporting documents duly signed by Director of ITSL to Regional Director, MCA, Western Zone.

The matter before Delhi High Court is now fixed on 17th May,2024.

6. **Mr. Kamlakar Babu Alias Baburao Patil & Others and ITSL & Others**

Brief Background.

One Kamalakar B. P has filed declaratory civil suit bearing No 226/2023 of which we have received notice from court of civil judge (senior division), Thane on 28/07/2023. The suit is basically for declaration of deed of mortgage dated 15/06/2021 executed by defendant no. 2 to no.7 in favour of ITSL as defendant No 1 as void, illegal, invalid, non-est, not binding on the plaintiffs together with relief for permanent injunction from entering into the suit property, selling in auction and/or agreeing to sale in auction the suit property under the garb or colour whatsoever. The plaintiff has also prayed for temporary injunction from selling of the suit property.

Current Status: The matter has now been listed on 16/04/2024 for further proceedings.

7. **Contempt Petition (Civil) No.953 of 2023 in Civil Appeal No. 1581 of 2023- Praduman Tondon & Ors. vs.Sanjay Soumitra Dangi & Ors. (Authum/RHFL case) before Supreme Court of India.**

Brief Facts

This contempt petition has been filed against Order dated the 3rd March, 2023 passed by Hon'ble Supreme Court of India. The case of the petitioners is that the cut-off date of 15th April 2022 for voting on the resolution plan and the distribution mechanism was not known. The matter was listed on 22/09/2023. Senio counsel suggested to file an application for deletion of ITSL's name from array of the parties. The application is being prepared and filed. The fresh date in the matter is yet to be notified. ITSL have engaged Shardul Amarchand Mangaldas & Co Advocates & Solicitors to represent ITSL before the Supreme Court.

Current Status – The matter has been listed for hearing on 18/04/2024

The matter was listed on 9th October,2023 before the bench comprising of Hon'ble Mr. Justice B.R. Gavai, Hon'ble Mr. Justice P S Narasimha and Hon'ble Mr. Justice Prashant Kumar Mishra before the Hon'ble Supreme Court of India.

Senior Counsel Mr. Gopal Sankaranarayanan along with the SAM team appeared for Respondent No.20 i.e. IDBI Trusteeship Service Limited, Senior Counsel Mr. Nikhil Nayyar appeared for Respondent No. 1-9 i.e. Authum Investment and Infrastructure Limited and its directors and Senior Counsel Mr. Dhruv Mehta appeared for Respondent No. 10-19 i.e. Reliance Home Finance Limited and its directors.

When the matter was called, the counsel for the petitioners submitted that counter-affidavits have been filed in the matter and they seek time to file rejoinders to the same. Pursuant to the same, the counsel for the petitioners prayed that the matter be next listed on a non-miscellaneous day for hearing. Mr. Sankaranarayanan thereafter apprised the Hon'ble Court that there are three similar contempt petitions that have been filed before the Hon'ble Court, however Respondent No. 20 is only a party to the captioned contempt petition. He further contented that no case has been made out against respondent no. 20 and therefore they should be deleted from the array of parties in the captioned matter. Such request was however objected to by the Appellant. In reference to the same, the Hon'ble Court passed an oral remark that respondent no.20 should file an application for deletion from the array of parties, if they wish to be deleted.

8. CBM Constructions LLP Vs. IDBI Trusteeship Services Ltd. & Ors.- Suit No. CS SCJ/987/2023 before Senior Civil Judge cum RC, South-East, Saket, New Delhi.

Brief Background:- CBM Constructions LLP, one of the debenture holder in the case of Three C Green Developers Pvt. Ltd. has filed suit bearing No. CS SCJ/987/2023 before senior civil Judge cum RC, South-East, Saket, New Delhi , praying for:-

i) directions to ITSL for transfer of pledged shares of defendant no.2 and 5 and place the directors in the said companies
ii) permanent and prohibitory injunction restraining defendant nos.3,4,6,7,8 &9 in any manner corresponding with any third agencies on behalf of defendant No.2 and 5
iii) directing defendant no.1 to immediately execute the share transfer in its favour and palce the directors in defendant No. 2 and 5 as called upon by communication dated 5.8.2023
iv) declare that defendant no.3 to 10 have no right and interest in defendant no.2 and 5.
v) Prayer against ITSL for transfer of pledged shares has already been complied by ITSL and suit against ITSL do not survive.

Current Update:-

The Matter was listed for hearing on 16.01.2024. The matter has now listed on 10/04/2024.

We have filed our WS and Application for deletion of our name from array of the parties on 11th January, 2024.

9. DSP Asset Managers Pvt. Ltd. vs. Grant Thornton (Bharat) LLP & Ors.- Company Application No. 19 of 2024 before NCLT, Mumbai.

Brief Background:

DSP Asset Managers Ltd. has filed the Company Application No. 19 of 2024 before NCLT, Mumbai praying for:-
i) Condonation of delay in filing claim before parent Company IL & FS.
ii) The allegation against ITSL is that the ITSL has delayed in filing their claim with GT for admission.

Current Status:

We are in the process of filing our Written Statement in the said Application. The matter was first listed on 13/02/2024. On the said dated NCLT Bench has directed ITSL to file written statement before the next date of hearing i.e.12th April, 2024.

V. Taxation Proceedings

Details of all outstanding direct tax and indirect tax proceedings (i) against the Trust, the Sponsor/Project Manager, the Investment Manager, their respective Associates, the Sponsor Group and the Trustee and (ii) involving the Project SPVs, as at the date of this Letter of Offer are disclosed below:

Nature of Proceedings	Number of Proceedings	Amount involved (in ₹ million)
Direct Tax*		
Trust	Nil	Nil
Sponsor/Project Manager	Nil	Nil
Associates of the Sponsor/Project Manager (excluding the Sponsor Group)	6	52.79
Sponsor Group	1	3.12
Project SPVs	4	84.79
Investment Manager	Nil	Nil
*Associates of the Investment Manager***	Nil	Nil
Trustee	Nil	Nil***
Indirect Tax*		
Trust	Nil	Nil
Sponsor/Project Manager	Nil	Nil
Associates of the Sponsor/Project Manager (excluding the Sponsor Group)	4	148.78
Sponsor Group	Nil	Nil
Project SPVs	Nil	Nil
Investment Manager	Nil	Nil
*Associates of the Investment Manager***	Nil	Nil
Trustee	Nil	Nil
Such amount excludes any interest or penalty in relation to such direct and indirect tax proceedings.* * Excludes Associates of the Sponsor/Project Manager.* **** For AY 2016-17 disputed tax liabilities is ₹37.90 million. NIL proceedings held.*		

VI. Certain other matters

1. Ravindra Dhariwal, a non-executive director on the board of directors of the Sponsor, resigned from the position of independent director of Future Retail Limited (FRL) with effect from July 23, 2022, due to FRL being referred to insolvency / initiation of corporate insolvency resolution process and his power/role as Independent Director of FRL being suspended as per the provisions of the Insolvency and Bankruptcy Code, 2016. Further, SEBI has initiated an investigation into the affairs of FRL to determine if there was any violation under the provisions of SEBI Regulations/ Rules/ Directives. These matters are currently pending.

GOVERNMENT AND OTHER APPROVALS

On the basis of the list of material approvals, consents, licenses and permissions provided below, the Trust can undertake the Issue and the Trust, the Project SPVs can undertake each of their respective current business activities and other than as stated below, no further material approval, consent, license or permission from any regulatory authority is required to undertake the Issue or continue such business activities. Unless otherwise stated, these approvals are valid as of the date of this Letter of Offer. For details in connection with the regulatory and legal framework within which we operate, see "Regulations and Policies" on page 276.

Certain licenses and/or approvals may expire/elapse periodically, in the ordinary course of business, and applications to the appropriate authorities for the renewal of such licenses and/or approvals are/will be submitted in accordance with applicable requirements and procedures.

A. Approvals in Relation to the Issue

1. Resolutions dated March 5, 2024, March 8, 2024, March 13, 2024 and March 14, 2024 of the board of directors of the Investment Manager in relation to the Issue and other related matters.

2. In-principle approval of the NSE dated March 13, 2024 for the listing of the Units to be issued pursuant to the Issue.

3. Letter dated January 23, 2024 issued by the SEBI granting certain exemptions to the Trust in relation to undertaking a fast-track rights issue.

B. Registration of the Trust

1. The SEBI has issued a certificate dated November 25, 2019 for registration of the Trust as an infrastructure investment trust (registration number IN/InvIT/19-20/0012).

The registration certificate has been granted subject to the following conditions, *inter-alia*, as specified in Regulation 7 of the InvIT Regulations:

(i) the Trust shall abide by the provisions of the SEBI Act and the InvIT Regulations;
(ii) the Trust shall forthwith inform the SEBI in writing, if any information or particulars previously submitted to the SEBI are found to be false or misleading in any material particular or if there is any material change in the information already submitted;
(iii) the Trust and the parties to the Trust shall satisfy with the conditions specified in Regulation 4 of the InvIT Regulations at all times;
(iv) the Trust and the parties to the Trust shall comply, at all times, with the code of conduct as specified in Schedule VI of the InvIT Regulations, wherever applicable.

The certificate also states:

(i) that the investment conditions and other restrictions will apply to all investments, distributions etc. made;
(ii) that for issuance and listing of Units issued in terms of Chapter VIA of the InvIT Regulations, the Trust shall fulfill the conditions as may be prescribed by the SEBI from time to time;
(iii) that the transaction for transfer of the underlying assets/shares or interest in SPVs to the Trust and the corresponding issue of the Trust's Units to the transferor entity shall happen only after the closure of the initial offer;
(iv) the minimum investment and lot size for an InvIT for a public issue or a private placement;
(v) that the Trust shall keep and maintain the books of accounts, records and such other documents as may be required by the SEBI under the InvIT Regulations from time to time;
(vi) that the Trust shall ensure compliance with the guidelines/directives/instructions/circulars etc. as may be issued from time to time by the SEBI or the Government of India relating to the activities carried on by the Trust;
(vii) that the Trust shall not make use of its status as a SEBI registered InvIT in furtherance of unrelated activities or any other purpose which is not permitted under the InvIT Regulations;
(viii) that the Trust's actions shall be governed by the SEBI Act and the InvIT Regulations in respect of activities carried on as an InvIT;

(ix) that any material change in the information on the basis of which registration is granted must be communicated to SEBI immediately; and
(x) that the registration has been granted on the basis of information available with the SEBI at the relevant point of time and does not preclude the SEBI from cancelling the registration later if anything adverse is found against the Trust or in case of a conviction.

Pursuant to a letter dated January 30, 2020, the SEBI has, *inter-alia*, taken on record the rights and provided to the investors in the Trust.

2. Approval dated January 3, 2020 issued by the NHAI for establishing the Trust and the transfer of the Project SPVs subject to, *inter-alia*, the following conditions:

(i) submission of no-objection certificates from the lenders of all the Project SPVs;
(ii) the concessionaire/developer is required to comply with all the provisions of the concession agreements including 51% holding in the Trust until two years after completion / provisional COD of the projects;
(iii) the incoming investor will comply to all relevant contractual obligations of the concession agreements;
(iv) the proposal submitted pursuant to the letter dated September 16, 2019 for establishing the Trust, transfer of the Project SPVs to the Trust and the transfer of 49% in the Trust shall not have the effect of jeopardizing the interests of the NHAI in any manner; and
(v) an undertaking that all statutory compliances as required by the SEBI guidelines shall be adhered to.

C. Approvals in Relation to the Project SPVs

Completion Certificates

1. Completion certificate dated March 29, 2019, with respect to 167.04 km stretch of KTL's Kaithal-Rajasthan border section of NH 152/65 project.

2. Completion certificate dated November 25, 2019, effective from October 15, 2019, with respect to the four-laning of the Solapur to Yedeshi section km. 0.000 to km. 100.000 (design length 98.717 km) of NH 211 project.

3. Provisional completion certificate dated January 31, 2020 with respect to 141.00 km stretch of IRB WTL's Goa-Karnataka Border – Kundapur section of NH-17 (now NH-66). The aforesaid provisional completion certificate was issued along with a punch list containing certain items to be completed within 90 days from the date of issuance thereof, including, *inter alia*, (a) laying of earthwork, GSB, WMM, DBM, SDBC, RCC drain, and footpath in the service road; (b) laying of earthwork, GSB, DLC, PQC, toll plaza tunnel on RHS and kerb in the toll plaza on RHS at km 182+850; (c) slope dressing; (d) chute drain stetches; (e) slope protection which includes pithcing on structures and slope protection on high embankment slope; (f) avenue plantation; (g) structural numbering and construction of appron; (h) static weigh bridge construction; (i) construction of truck bay, bus shelter, and boundary stones; (j) cleaaning of waterway of structure and providing cut drain as per standards; and (k) surveying with network survey vehicle from Ch 93.70 to Ch 280.94.

4. (i) Provisional completion certificate dated February 28, 2022 with respect to 20.050 km stretch of IRB WTL's Goa-Karnataka Border – Kundapur section of NH-17 (now NH-66), in addition to earlier accorded 141.00 km i.e. total of 161.05 km; and (ii) provisional completion certificate dated March 24, 2023 with respect to 170.98 km stretch of IRB WTL's Goa-Karnataka Border – Kundapur section of NH-17 (now NH-66).

5. Completion certificate dated September 24, 2020 with respect to 189.02 km stretch of YATL's Yedeshi-Aurangabad section of NH 211 project.

6. Completion certificate dated November 24, 2020 with respect to the six-laning of AETL's Agra-Etawah bypass section of NH-2 (km 199.660 to km 232.525).

7. Completion certificate dated May 31, 2021 with respect to the six-laning of UTL's section of NH-8

(now NH-48), effective from June 1, 2021.

8. Completion certificate dated August 14, 2021 with respect to the six-laning of CGTL effective from August 14, 2021.

9. Completion certificate dated July 1, 2022 with respect to 78.532 km stretch of the six-laning of IRB HMTL effective from July 1, 2022. Completion Certificate (COD-II) dated April 7, 2023 with respect to additional length of 9.75 km of the six-laning of IRB HMTL.

10. Completion certificate dated July 20, 2022 with respect to the six-laning of KGTL effective from July 20, 2022.

Approvals for Continuing Commercial Operations

The Project SPVs are required to obtain and maintain certain permits, registrations, approvals and licenses during the commercial operations phase of their respective projects, as disclosed below:

1. Certificate of registration of establishment under the Maharashtra Shops and Establishment (Regulation of Employment and Condition of Service) Act, 2017.

2. Registrations under various tax laws, including but not limited to, permanent account number, professional tax and goods and services tax.

3. Registration under the Legal Metrology Act, 2009 and respective state government rules for weigh-in-motion and road weigh bridge.

4. Registrations under applicable labour laws including, but not limited to, registrations under the Employees' Provident Funds and Miscellaneous Act, 1952, the Employees' State Insurance Act, 1948 and the Contract Labour (Regulation and Abolition) Act, 1970.

5. No-objection certificates and authorizations from the relevant state pollution control board for consent to operate under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 and Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.

The Project SPVs have obtained the necessary permits, registrations, approvals and licenses from the appropriate regulatory and governing authorities that are required to operate their respective businesses. Certain approvals may have lapsed in their normal course and the respective Project SPVs have either made applications to the appropriate authorities for renewal of such licenses and/or approvals or are in the process of making such applications.

D. Approvals applied for, but not yet received

As at the date of this Letter of Offer, except as disclosed below, there are no approvals required to be obtained by the Trust or the Project SPVs for which applications have been made, but approvals have not been received:

- Clearance from State Pollution Control Board for setting up of batching plant by STPL.

E. Approvals for which applications are yet to be made

As at the date of this Letter of Offer, except as disclosed below, there are no material approvals required to be obtained by the Trust or the Project SPVs for which applications are yet to be made:

- Factory license from the Director of Industrial Safety and Health for setting up of batching plant by STPL.

F. Intellectual Property

The Project SPVs, the Investment Manager and the Trustee have entered into a name licensing agreement with the Sponsor. For details, see "*Related Party Transactions*" on page 294.

OTHER REGULATORY DISCLOSURES

Eligibility for this Issue

A resolution dated March 5, 2024 has been passed by the Board of the Investment Manager approving the Issue. Resolutions dated March 5, 2024, March 8, 2024, March 13, 2024 and March 14, 2024 have been passed by the Board of the Investment Manager approving the Record Date, the Issue Price, certain other terms of the Issue and this Letter of Offer.

Units of the same class which are proposed to be allotted are already listed on the NSE.

The NSE, through its letter dated March 13, 2024 has granted in-principle approval for the listing of the Units proposed to be issued pursuant to the Issue.

The Trust is in compliance with the continuous listing and disclosure requirements under the InvIT Regulations and circulars issued thereunder.

The Trust holds not less than 80% of its assets in eligible infrastructure projects.

The Issue is a fast-track rights issue and the conditions prescribed under paragraph 9.11 of Chapter 9 of the SEBI Master Circular are complied with, or where applicable, exemptions have been obtained from the SEBI pursuant to its letter dated January 23, 2024 with respect to the Issue.

Prohibition by SEBI or RBI

None of the Trust, the Sponsor, the Investment Manager, the Project Manager and the Trustee, or the respective promoters or directors of any of the Sponsor, the Investment Manager, the Project Manager or the Trustee (i) is debarred from accessing the securities market by SEBI; (ii) is a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust which is debarred from accessing the capital market under any order or direction made by SEBI; or (iii) is in the list of wilful defaulters published by the RBI.

None of the respective promoters or directors of the Sponsor or Investment Manager or the Trustee (i) has been declared a fugitive economic offender under Section 12 of the Fugitive Economic Offenders Act, 2018; (ii) have direct or indirect relations with any infrastructure investment trusts or companies, their sponsors, promoters, trustees, investment managers and whole-time directors, which are compulsorily delisted by any recognized stock exchange; or (iii) has been a promoter or whole-time director of any company which has been compulsorily delisted in terms of the Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2009 or the Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2021, as applicable, during the last 10 years.

Filing

The Investment Manager, through the Lead Manager, has filed this Letter of Offer dated March 14, 2024 with the SEBI. The Lead Manager has also submitted a due diligence certificate (in the form prescribed under the SEBI Master Circular) dated March 14, 2024 to the SEBI along with this Letter of Offer.

Disclaimer clause of NSE

"As required, a copy of this letter of offer has been submitted to National Stock Exchange of India Limited (hereinafter referred to as NSE). NSE has given vide its letter Ref. No. NSE/LIST/ dated March 13, 2024, permission to the Issuer to use the Exchange's name in this letter of offer as one of the stock exchanges on which this Issuer's securities are proposed to be listed. The Exchange has scrutinized this letter of offer for its limited internal purpose of deciding on the matter of granting the aforesaid permission to this Issuer.

It is to be distinctly understood that the aforesaid permission given by NSE should not in any way be deemed or construed that the letter of offer has been cleared or approved by NSE; nor does it in any manner warrant, certify or endorse the correctness or completeness of any of the contents of this letter of offer; nor does it warrant that this Issuer's securities will be listed or will continue to be listed on the Exchange; nor

does it take any responsibility for the financial or other soundness of this Issuer, its promoters, its management or any scheme or project of this Issuer.

Every person who desires to apply for or otherwise acquire any securities of this Issuer may do so pursuant to independent inquiry, investigation and analysis and shall not have any claim against the Exchange whatsoever by reason of any loss which may be suffered by such person consequent to or in connection with such subscription /acquisition whether by reason of anything stated or omitted to be stated herein or any other reason whatsoever."

Listing

The Units issued through this Letter of Offer are proposed to be listed on the NSE. Applications will be made to the NSE for obtaining permission for listing and trading of the Units.

Minimum Allotment

The minimum allotment and trading lot of Units issued pursuant to the Issue to any investor shall be equivalent to the minimum allotment and trading lot applicable to the Units of the same class. For details, see "*The Issue*" on page 64.

Minimum Subscription

The minimum subscription for purposes of the Issue shall be 90% of the total Issue size through this Letter of Offer (the "**Minimum Subscription**"). If the Minimum Subscription for the Issue is not received, the Application Amounts shall be refunded to the Applicants forthwith and not later than 15 days from the Issue Closing Date. Also see "*Issue Procedure*" on page 721.

Disclaimer clauses from the Investment Manager, the Trustee, the Sponsor/Project Manager and the Lead Manager

The Investment Manager, the Trustee, the Sponsor/Project Manager and the Lead Manager accept no responsibility for statements made otherwise than in this Letter of Offer or in any advertisement or other material issued by the Investment Manager, the Trustee or the Sponsor/Project Manager or by any other persons at the instance of the Investment Manager, the Trustee or the Sponsor/Project Manager and anyone placing reliance on any other source of information would be doing so at his own risk.

Eligible Unitholders who invest in the Issue will be deemed to have represented to the Investment Manager, the Trustee, the Sponsor/Project Manager and the Lead Manager and their respective directors, officers, agents, affiliates and representatives that they are eligible under all applicable laws, rules, regulations, guidelines and approvals to acquire Units in the Issue, and are relying on independent advice / evaluation as to their ability and quantum of investment in the Issue.

The Lead Manager and their respective affiliates may engage in transactions with and perform services for the Trust, the Project SPVs, the Investment Manager, the Trustee, the Sponsor/Project Manager, the Sponsor Group or their respective affiliates in the ordinary course of business and have engaged, or may in the future engage, in transactions with such parties, for which they have received and may in the future receive, compensation.

Disclaimer with respect to jurisdiction

This Letter of Offer has been prepared under the provisions of Indian laws and the applicable rules and regulations thereunder. Any disputes arising out of the Issue will be subject to the jurisdiction of the appropriate courts in Mumbai, India only.

Prohibition on Offer of Incentives

No person connected with this Issue, including any person connected with the distribution of this Issue, shall offer any incentive, whether direct or indirect, in any manner, whether in cash or kind or services or otherwise to any person for making an application for Allotment of the Units.

Restriction on Further Capital Issues

The Trust shall not make any further issue of Units in any manner during the period between the date of filing this Letter of Offer with the SEBI and the date of listing of the Units to be issued pursuant to the Issue on the NSE or the refund of Application Amounts, as applicable.

Participation by the Sponsor

The Sponsor has undertaken to mandatorily subscribe to its rights entitlement and not renounce such rights, except for purposes of compliance with minimum public unitholding norms as prescribed under the InvIT Regulations, to the extent applicable. Further, the Sponsor proposes to subscribe to additional Units in the Issue in excess of its rights entitlements. The Sponsor's post-Issue unitholding is expected to be 568,039,840 Units (constituting approximately 51% of the total number of Units on a post-Issue basis) subject to availability of additional Units and compliance with minimum public unitholding requirements.

Undertakings by the Investment Manager

The Investment Manager (on behalf of the Trust) undertakes the following:

- at any given time, there shall be only one denomination for the Units;
- the Units to be issued pursuant to this Issue shall rank *pari passu* with the existing Units of the Trust in all respects;
- the Rights Entitlements shall be credited to the demat account of the Unitholders before the date of opening of this Issue for renunciation;
- the Trust shall not withdraw this Issue after announcement of the Record Date; and
- it shall comply with such disclosure and accounting norms specified by SEBI from time to time.

The Units have not been and will not be registered, listed or otherwise qualified in any other jurisdiction outside India and may not be offered or sold, and Applications may not be made by persons in any such jurisdiction, except in compliance with the applicable laws of such jurisdiction.

THE RIGHTS ENTITLEMENTS AND THE UNITS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT, OR ANY U.S. STATE SECURITIES LAWS AND MAY NOT BE OFFERED, SOLD, RESOLD OR OTHERWISE TRANSFERRED WITHIN THE UNITED STATES, EXCEPT IN A TRANSACTION EXEMPT FROM THE REGISTRATION REQUIREMENTS OF THE U.S. SECURITIES ACT. THE UNITS AND RIGHTS ENTITLEMENTS REFERRED TO IN THIS LETTER OF OFFER ARE BEING OFFERED AND SOLD IN OFFSHORE TRANSACTIONS OUTSIDE THE UNITED STATES IN COMPLIANCE WITH REGULATION S TO UNITHOLDERS LOCATED IN JURISDICTIONS WHERE SUCH OFFER AND SALE OF THE UNITS ARE PERMITTED UNDER THE LAWS OF SUCH JURISDICTIONS. THE OFFERING TO WHICH THIS LETTER OF OFFER RELATES IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSTRUED AS, AN OFFERING OF ANY UNITS OR RIGHTS ENTITLEMENTS FOR SALE IN THE UNITED STATES OR AS A SOLICITATION THEREIN OF AN OFFER TO BUY ANY OF THE SAID SECURITIES.

SECTION IX – ISSUE PROCEDURE

This section is for the information of the Applicants proposing to apply in the Issue. Investors should carefully read the provisions contained in this Letter of Offer, the Rights Entitlement Letter and the Application Form, before submitting the Application Form. The Trustee, the Sponsor, the Investment Manager and the Lead Manager are not liable for any amendments or modifications or changes in applicable laws or regulations, which may occur after the date of this Letter of Offer. Applicants are advised to make their independent investigation (for which the Investment Manager, the Sponsor, the Trust and the Lead Manager take no responsibility or liability) and ensure that the Application Form is correctly filled up.

I. Overview

The Issue and the Units issued pursuant to the Issue, are subject to the terms and conditions contained in this Letter of Offer, the Rights Entitlements Letter, the Application Form, the InvIT Regulations, and the circulars, clarifications, guidelines and notifications issued by the SEBI, the Government of India and other governmental, statutory and regulatory authorities from time to time, including approvals, from RBI or other regulatory authorities, and the terms and conditions as stipulated in the Allotment Advice. The Issue shall be undertaken in accordance with the InvIT Regulations, the SEBI Master Circular and other applicable law.

II. Dipatch and Availability of Issue Material

The Investment Manager and the Lead Manager will dispatch this Letter of Offer, Application Form, the Rights Entitlement Letter and other Issue materials only to Eligible Unitholders holding Units as of the Record Date (i) who have provided an address in India or (ii) who are foreign corporate or institutional Unitholders in jurisdictions where it is not illegal to make an offer or invitation to Offer or such an invitation or offer or would subject the Trust, the Parties to the Trust, the Lead Manager and their respective affiliates to any filing or registration requirement (other than in India) (such jurisdictions, the "**Identified Jurisdictions**").

No action has been or will be taken to permit the Issue in any jurisdiction where action would be required for that purpose, except that this Letter of Offer has been filed with the SEBI and the Stock Exchange. Accordingly, the Rights Entitlements or Units may not be offered or sold, directly or indirectly, and this Letter of Offer or any offering materials or advertisements in connection with the Issue may not be distributed, in whole or in part, in any jurisdiction other than India and to foreign corporate or institutional Unitholders in Identified Jurisdictions, except in accordance with legal requirements applicable in such jurisdiction. Receipt of this any Issue material will not constitute an invitation or offer in those jurisdictions in which it would be illegal to make such an invitation or offer or would subject the Trust, the Parties to the Trust, the Lead Manager and their respective affiliates to any filing or registration requirement (other than in India) and, in those circumstances, this Letter of Offer and other Issue material must be treated as sent for information only and should not be acted upon for subscription to the Units and should not be copied or redistributed. Accordingly, persons receiving a copy of this Letter of Offer, the Application Form and any other Issue material should not, in connection with the issue of the Units or the Rights Entitlements, distribute or send such material in or into any jurisdiction where to do so, would or might contravene local securities laws or regulations or would subject the Trust, the Parties to the Trust, the Lead Manager and their respective affiliates to any filing or registration requirement (other than in India). If this Letter of Offer, the Application Form or other Issue material is received by any person in any such jurisdiction, or by their agent or nominee, they must not seek to subscribe to the Units or the Rights Entitlements.

This Letter of Offer and the Application Form will be sent only to the e-mail addresses of Eligible Unitholders who have provided their e-mail addresses to the Investment Manager.

The Investment Manager, the Registrar and the Lead Manager shall make arrangements for distribution of the Application Form along with this Letter of Offer to all Eligible Unitholders prior to the Issue Opening Date.

NO OFFER IN THE UNITED STATES

THE RIGHTS ENTITLEMENTS AND THE UNITS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT, OR ANY U.S. STATE SECURITIES LAWS AND MAY NOT BE OFFERED, SOLD, RESOLD OR OTHERWISE TRANSFERRED WITHIN THE UNITED STATES, EXCEPT IN A TRANSACTION EXEMPT FROM THE REGISTRATION REQUIREMENTS OF THE U.S. SECURITIES ACT. THE UNITS AND RIGHTS ENTITLEMENTS REFERRED TO IN THIS LETTER OF

OFFER ARE BEING OFFERED AND SOLD IN OFFSHORE TRANSACTIONS OUTSIDE THE UNITED STATES IN COMPLIANCE WITH REGULATION S TO UNITHOLDERS LOCATED IN JURISDICTIONS WHERE SUCH OFFER AND SALE OF THE UNITS ARE PERMITTED UNDER LAWS OF SUCH JURISDICTIONS. THE OFFERING TO WHICH THIS LETTER OF OFFER RELATES IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSTRUED AS, AN OFFERING OF ANY UNITS OR RIGHTS ENTITLEMENTS FOR SALE IN THE UNITED STATES OR AS A SOLICITATION THEREIN OF AN OFFER TO BUY ANY OF THE SAID SECURITIES.

Neither the Trust, nor any person acting on behalf of the Trust, will accept a subscription or renunciation from any person, or the agent of any person, who appears to be, or who the Trust, or any person acting on behalf of the Trust, has reason to believe is, in the United States when the buy order is made. No Application Form should be postmarked in the United States, electronically transmitted from the United States or otherwise dispatched from the United States or from any other jurisdiction where it would be illegal to make an offer of securities under this Letter of Offer.

Please note that none of the Investment Manager, the Sponsor, the Lead Manager or the Registrar will be liable for non-dispatch of physical copies of the Issue materials, including this Letter of Offer, the Rights Entitlement Letter and the Application Form, or delay in the receipt of this Letter of Offer, the Rights Entitlement Letter or the Application Form attributable to non-availability of the e-mail addresses of Eligible Unitholders or electronic transmission delays or failures (including corruption of the document being transmitted electronically), or if the Application Forms or the Rights Entitlement Letters are delayed or misplaced in transit. To update the respective email addresses or mobile numbers in the records maintained by the Registrar or Investment Manager, Eligible Unitholders should visit https://rights.kfintech.com or www.irbinfratrust.co.in.

The distribution of the Issue Materials and the issue of Units on a rights basis to persons in certain jurisdictions outside India is restricted by legal requirements prevailing in those jurisdictions.

Receipt of the Issue materials (including by way of electronic means) will not constitute an offer, invitation to or solicitation by anyone in any jurisdiction or in any circumstances in which such an offer, invitation or solicitation is unlawful or not authorized or to any person to whom it is unlawful to make such an offer, invitation or solicitation. In those circumstances, the Issue materials must be treated as sent for information only and should not be acted upon for making an Application and should not be copied or re-distributed.

Any person who makes an application to acquire Rights Entitlements and the Units offered in the Issue will be deemed to have declared, represented and warranted that such person is authorized to acquire the Rights Entitlements and the Units in compliance with all applicable laws and regulations prevailing in such person's jurisdiction and India, without requirement for the Trust, Parties to the Trust, the Lead Manager or their respective affiliates to make any filing or registration (other than in India).

III. Credit of Rights Entitlements in Demat Accounts of Eligible Unitholders

In accordance with InvIT Regulations read with the SEBI Master Circular, the credit of Rights Entitlements and Allotment of Units shall be made in the dematerialized form only. Prior to the Issue Opening Date, the Investment Manager and the Lead Manager shall ensure credit of the Rights Entitlements to (i) the demat accounts of the Eligible Unitholders holding the Units in dematerialised form (other than fractional entitlement); and (ii) a demat suspense escrow account opened by the Investment Manager, for the Eligible Unitholders which would comprise Rights Entitlements relating to (a) the Units held in a demat suspense account; or (b) the demat accounts of the Eligible Unitholder which are frozen or details of which are unavailable with the Investment Manager or with the Registrar on the Record Date; or (d) credit of the Rights Entitlements returned/reversed/failed; or (f) the ownership of the Units under dispute, including any court proceedings, as applicable.

Renouncees

All rights and obligations of the Eligible Unitholders in relation to Applications and refunds pertaining to the Issue shall apply to the Renouncees as well.

Basis for the Issue

The Units will be offered for subscription for cash to the Eligible Unitholders whose names appear as unitholders as per the list to be furnished by the Depositories in respect of the Units held in dematerialized form on the Record Date.

Rights Entitlements

As your name appears as a unitholder in respect of the Units held in dematerialized form as on the Record Date, you may be entitled to subscribe to the number of Units as set out in the Rights Entitlement Letter.

Eligible Unitholders can also obtain the details of their respective Rights Entitlements from the website of the Registrar (https://rights.kfintech.com) by entering their DP ID and Client ID. The link for details of Rights Entitlements will also be available on the website of the Trust (www.irbinfratrust.co.in).

Rights Entitlements shall be credited to the respective demat accounts of Eligible Unitholders before the Issue Opening Date only in dematerialized form.

IV. Terms of the Issue

Issue Price

Each Unit is being offered at a price of ₹244.86* per Unit in the Issue. The Issue Price for the Units has been arrived at by the Investment Manager in consultation with the Lead Manager.

**The Issue Price is ₹244.8586956. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*

Rights Entitlements Ratio

The Units are being offered on a rights basis to the Eligible Unitholders in the ratio of one Unit for every 11.11* Units held by the Eligible Unitholders as on the Record Date.

** The Rights Entitlement Ratio is one Unit for every 11.1053615760870 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*

Renunciation of Rights Entitlements

The Issue includes a right exercisable by Eligible Unitholders to renounce the Rights Entitlements credited to their respective demat account either in full or in part. The renunciation from non-resident Eligible Unitholders to resident Eligible Unitholders and vice versa shall be subject to provisions of the FEMA Rules and other circulars, directions, or guidelines issued by RBI or the Ministry of Finance from time to time. However, the facility of renunciation shall not be available to or operate in favor of an Eligible Unitholder being an erstwhile OCB except is in compliance with the FEMA Rules and other circulars, directions, or guidelines issued by RBI or the Ministry of Finance.

The renunciation of Rights Entitlements credited in your demat account can be made either by sale of such Rights Entitlements using the secondary market platform of the Stock Exchange or through an off-market transfer. For details, see " – *Procedure for Renunciation of Rights Entitlements*" on page 727.

In this regard, the Investment Manager will make necessary arrangements with NSDL and CDSL for the crediting of the Rights Entitlements to the demat accounts of the Eligible Unitholders in a dematerialized form. A separate ISIN for the Rights Entitlements has also been generated which is INE0C8K20059. Such ISIN shall remain frozen (for debit) until the Issue Opening Date.

The said ISIN shall be suspended for transfer by the Depositories post the Issue Closing Date.

Eligible Unitholders are requested to provide relevant details (such as copies of self-attested PAN and details confirming the legal and beneficial ownership of their respective Units) to the Investment Manager or the Registrar not later than two Working Days prior to the Issue Closing Date, to enable the credit of their Rights Entitlements by way of transfer from the demat suspense escrow account to their demat account at least one day before the Issue Closing Date, to enable such Eligible Unitholders to make an application in the Issue, and such communication shall serve as an intimation to such Eligible Unitholders in this regard. Such Eligible Unitholders are also requested to ensure that their demat account, details of which have been provided to Investment Manager or the Registrar, is active to facilitate such transfer.

Additionally, the Investment Manager will submit the details of the total Rights Entitlements credited to the demat accounts of the Eligible Unitholders and the demat suspense escrow account to the Stock Exchange after completing the corporate action. The details of the Rights Entitlements with respect to each Eligible Unitholders can be accessed by such respective Eligible Unitholders on the website of the Registrar after keying in their respective details along with other security control measures implemented thereat.

Trading of the Rights Entitlements

Prior to the Issue Opening Date, the Investment Manager will obtain the approval from the Stock Exchange for trading of Rights Entitlements. Applicants shall be able to trade their Rights Entitlements either through on-market renunciation or through off-market renunciation. The trades through on-market renunciation and off-market renunciation will be settled by transferring the Rights Entitlements through the depository mechanism.

On-market renunciation shall take place electronically on the secondary market platform of the Stock Exchange in accordance with the settlement rules of the Stock Exchange. The transactions will be settled on trade-for-trade basis. The Rights Entitlements shall be tradable in dematerialized form only.

On-market renunciation shall take place only on March 19, 2024 (the renunciation period for on-market renunciation). No assurance can be given regarding the active or sustained on-market renunciation or the price at which the Rights Entitlements will trade. Eligible Unitholders are requested to ensure that renunciation through off-market transfer is completed in such a manner that the Rights Entitlements are credited to the demat account of the Renouncees on or prior to the Issue Closing Date. For details, see "*—Procedure for Renunciation of Rights Entitlements–On Market Renunciation*" and "*—Procedure for Renunciation of Rights Entitlements–Off Market Renunciation*" on page 728. Once the Rights Entitlements are credited to the demat account of the Renouncees, application in the Issue can be made until the Issue Closing Date. For details, please see the section entitled "*—Procedure for Application*" on 726.

Please note that the Rights Entitlements which are neither renounced nor subscribed by the Applicants on or before the Issue Closing Date shall lapse and shall be extinguished after the Issue Closing Date.

No Units for such lapsed Rights Entitlements will be credited, even if such Rights Entitlements were purchased from market. Persons who are credited the Rights Entitlements are required to make an application to apply for Units offered under the Issue for subscribing to the Units offered pursuant to the Issue.

Terms of Payment

Full amount of ₹244.86* per Unit shall be payable on Application.

**The Issue Price is ₹244.8586956. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*

Fractional Entitlements

Fractional entitlements will not be credited to the Eligible Unitholders' demat accounts. However, such Unitholders would be given preference for the allotment of one additional lot if they apply for it, as per the procedure mentioned in the section entitled "*—Basis of Allotment*" on page 730.

The Units are being offered on a rights basis to existing Eligible Unitholders in the ratio of one Unit for every 11.11* Units held as on the Record Date. Fractional entitlements of the Rights Entitlement will be credited to a suspense account. Accordingly, if the Unitholding of any of the Eligible Unitholders is less than 11.1053615760870 Units or is not in the multiple of 11.1053615760870 Units, the fractional entitlements of such Eligible Unitholders shall be ignored. However, the Eligible Unitholders whose fractional entitlements are being ignored, will be given preferential consideration for the Allotment of one additional lot if they apply for additional Units in the Issue over and above their Rights Entitlements, if any, subject to availability of lots in the Issue post allocation towards Rights Entitlements applied for.

** The Rights Entitlement Ratio is one Unit for every 11.1053615760870 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*

Illustration in relation to Fractional Entitlements

For example, if an Eligible Unitholder holds 11.1053615760870 Units, such Unitholder will be entitled to one Unit and will also be given a preferential consideration for the Allotment of one lot if such Eligible Unitholder has applied for additional Units in the Issue, over and above his/her/its Rights Entitlements, subject to availability of lots in the Issue post allocation towards Rights Entitlements applied for. Further, Eligible Unitholders holding less than 11.1053615760870 Units shall have 'zero' entitlement. Such Eligible Unitholders are entitled to apply for additional Units in the Issue and will be given preference in the Allotment of one lot, if such Eligible Unitholders apply for additional lots in the Issue, subject to availability of lots in the Issue post-allocation.

Ranking

The Units to be issued and allotted pursuant to the Issue shall be subject to the provisions of this Letter of Offer, the Rights Entitlement Letter, the Application Form, the InvIT Regulations, and the guidelines, notifications and regulations issued by SEBI, the Government of India and other governmental, statutory and regulatory authorities from time to time, including approvals, from RBI or other regulatory authorities, and the terms and conditions as stipulated in the Allotment advice. The Units to be issued and Allotted under the Issue shall rank *pari passu* with the existing Units, in all respects including distributions.

Listing and trading of the Units to be issued pursuant to the Issue

Subject to receipt of the listing and trading approvals, the Units proposed to be issued on a rights basis shall be listed and admitted for trading on the Stock Exchange. Unless otherwise permitted by the InvIT Regulations, the Units Allotted pursuant to the Issue will be listed as soon as practicable and all steps for completion of necessary formalities for listing and commencement of trading in the Units will be taken within such period prescribed under the InvIT Regulations. The Investment Manager has received in-principle approval from NSE pursuant to a letter dated March 13, 2024. The Investment Manager will apply to NSE for final approvals for the listing and trading of the Units subsequent to their Allotment. No assurance can be given regarding the active or sustained trading in the Units or the price at which the Units offered under the Issue will trade after the listing thereof.

The existing Units are listed and traded on NSE (Scrip Symbol: IRBIT) under the ISIN: INE0C8K23012. The Units shall be credited to a temporary ISIN which will be frozen until the receipt of the final listing and trading approvals from the Stock Exchange. Upon receipt of such listing and trading approvals from the Stock Exchange, the Units shall be debited from the temporary ISIN and credited shall to the new ISIN for the Units issued pursuant to the Issue and shall be available for trading. Accordingly, the temporary ISIN shall be permanently deactivated in the depository system of CDSL and NSDL.

The listing and trading of the Units issued pursuant to the Issue shall be based on the current regulatory framework then applicable. Accordingly, any change in the regulatory regime would affect the listing and trading schedule.

In case the Investment Manager fails to obtain listing or trading permission from the Stock Exchange, we shall refund through verifiable means the entire monies received within the timelines prescribed under applicable law.

Market Lot

The Units of the Trust shall be tradable only in dematerialized form. The trading lot for Units in dematerialized mode is 200,000 Units.

Arrangements for Disposal of Odd Lots

The Units issued pursuant to the Issue shall be traded in dematerialised form only and shall be issued in the applicable trading lot. Accordingly, no arrangement for disposal of odd lots are required for the Units issued pursuant to the Issue.

Notices

The Investment Manager and the Lead Manager will dispatch this Letter of Offer, Application Form, the Rights Entitlement Letter and other Issue materials only to Eligible Unitholders holding Units as of the Record Date (i) who have provided an address in India or (ii) who are foreign corporate or institutional Unitholders in Identified Jurisdictions. The Issue materials will be provided, only through e-mail, by the Registrar on behalf of the Investment Manager or the Lead Manager to Eligible Unitholders.

This Letter of Offer and the Application Form shall also be submitted with the Stock Exchange for making the same available on its website.

V. Procedure for Application

Application Form

The Application Form can be used by the Applicants, Eligible Unitholders as well as the Renouncees, to make Applications in the Issue basis the Rights Entitlements credited in their respective demat accounts or demat suspense escrow account, as applicable. Please note that one single Application Form shall be used by the Applicants to make Applications for all Rights Entitlements available in a particular demat account and applying in the Issue. In case of multiple demat accounts, the Applicants are required to submit a separate Application Form for each demat account.

Applicants will be required, *inter-alia*, to indicate the following in the Application Form:

- name of the Applicant to whom the Units are to be Allotted;
- number of Units held as on the Record Date;
- number of Units entitled to;
- number of Units applied for within the Rights Entitlements;
- number of additional Units applied for, if any;
- total number of Units applied for;
- the details of the Application Amount deposited by the Applicant into the Designated Account;
- details of the demat account to which the Units should be credited;
- the details of the Applicant's bank account along with fund transfer details, in case of any refund;
- that it is permitted to acquire the Units under the laws of any applicable jurisdiction and that it has necessary capacity and authority, and has obtained all necessary consents and authorizations to enable it to commit to this participation in the Issue and to perform its obligations in relation thereto (including, without limitation, on behalf of any person) and honor such obligations;
- it is eligible to invest in India and in the Units under applicable law, including the SEBI Master Circular and the FEMA Rules, and has not been prohibited by the SEBI or any regulatory authority from buying, selling or dealing in units or securities; and
- any other information which may be relevant to the Application.

Please note that Applications without depository account details shall be treated as incomplete and shall be rejected.

Each Applicant shall be required to make payment of the entire Application Amount for the Units at the Issue Price, only through electronic transfer to the Designated Account during the Issue Period, along with the Application Form.

Options available to the Eligible Unitholders

The Rights Entitlement Letter will clearly indicate the number of Units that the Eligible Unitholder is entitled to.

If an Eligible Unitholder applies in the Issue, then such Eligible Unitholder can:

(i) apply for its Units to the full extent of its Rights Entitlements; or
(ii) apply for its Units to the extent of part of its Rights Entitlements (without renouncing the other part); or
(iii) apply for Units to the extent of part of its Rights Entitlements and renounce the other part of its Rights Entitlements; or
(iv) apply for its Units to the full extent of its Rights Entitlements and apply for additional Units in the Issue; or
(v) renounce its Rights Entitlements in full.

Procedure for Application

Applicants may note that forms not filled completely or correctly as per instructions provided in this Letter of Offer and the Application Form are liable to be rejected. The Applications should adhere to the following:

(i) Applications must be made only in the prescribed Application Form;

(ii) Application Form must be completed in full, in BLOCK LETTERS in ENGLISH and in accordance with the instructions contained herein and in the Application Form. Incomplete Application Forms are liable to be rejected. Applicants must provide details of valid and active DP ID, Client ID and PAN clearly and without error. Invalid accounts, suspended accounts or where such account is classified as invalid or suspended shall not be considered for Allotment. Applicants should note that the Registrar, the Lead Manager and the Investment Manager will not be liable for errors in data entry due to incomplete or illegible Application Forms; and

(iii) Applicants are required to sign the Application Form. Applicants should ensure that the thumb impressions and signatures other than in the languages specified in the Eighth Schedule to the Constitution of India, are attested by a Magistrate or a Notary Public or a Special Executive Magistrate under official seal.

Submission of Application Form and Mode of Payment

All Application Forms are required to be duly completed with information including the name of the Applicant, the number of the Units applied for and the Application Amount deposited in the Designated Account, and include details of the bank account from which payment of amount was made as well as a confirmation of funds transfer.

The Application Form is required to be submitted to the Investment Manager and the Registrar electronically at the following addresses:

MMK Toll Road Private Limited
Attention: Mr. Kaustubh Shevade
Email: kaustubh.shevade@irb.co.in

KFin Technologies Limited
Attention: Mr. Williams R/Mr. M Murali Krishna
Email: williams.r@kfintech.com/murali.m@kfintech.com

The Investment Manager and the Registrar are not required to provide any written acknowledgement of the Application Form.

Additional Units

Applicants are eligible to apply for additional Units in the Issue, over and above their Rights Entitlements, provided that they are eligible to apply for Units under applicable law and they have applied for all the Units forming part of their Rights Entitlements without renouncing them in whole or in part. Where the number of additional Units applied for exceeds the number available for Allotment, the Allotment would be made as per the Basis of Allotment finalized in consultation with the Designated Stock Exchange. Applications for additional Units in the Issue, shall be considered and Allotment shall be made in accordance with the InvIT Regulations and in the manner prescribed under the section "— *Basis of Allotment*" on page 730.

Eligible Unitholders who renounce their Rights Entitlements cannot apply for additional Units in the Issue. Non-resident Renouncees, who are not Eligible Unitholders, cannot apply for additional Units in the Issue.

Also see "*Other Regulatory Disclosures – Participation by the Sponsor*" on page 720.

Procedure for Renunciation of Rights Entitlements

The Applicants may renounce the Rights Entitlements, credited to their respective demat accounts, either in full or in part, (a) by using the secondary market platform of the Stock Exchange; or (b) through an off-market transfer, during the Renunciation Period. The Applicants should have the demat Rights Entitlements credited/lying in his/her own demat account prior to the renunciation.

Applicants may be subject to adverse foreign, state or local tax or legal consequences as a result of trading in the Rights Entitlements. Applicants who intend to trade in the Rights Entitlements should consult their tax advisors or stock brokers regarding any cost, applicable taxes, charges and expenses (including brokerage) that may be levied for trading in Rights Entitlements.

The Trust, the Parties to the Trust, the Lead Manager and their respective affiliates accept no responsibility to bear or pay any cost, applicable taxes, charges and expenses (including brokerage), and such costs will be incurred solely by the Applicants.

On Market Renunciation

The Applicants may renounce the Rights Entitlements, credited to their respective demat accounts by trading/selling them on the secondary market platform of the Stock Exchange through a registered stock broker in the same manner as the existing Units of the Trust.

In this regard, the Rights Entitlements credited to the respective demat accounts of the Eligible Unitholders shall be admitted for trading on the Stock Exchange under ISIN INE0C8K20059 subject to requisite approvals. The details for trading in Rights Entitlements will be as specified by the Stock Exchange from time to time.

The Rights Entitlements are tradable in dematerialized form only.

The On Market Renunciation shall take place only during the Renunciation Period for On Market Renunciation, i.e., on March 19, 2024.

The Applicants holding the Rights Entitlements who desire to sell their Rights Entitlements will have to do so through their registered stock brokers by quoting the ISIN and indicating the details of the Rights Entitlements they intend to sell. The Applicants can place order for sale of Rights Entitlements only to the extent of Rights Entitlements available in their demat account.

The On Market Renunciation shall take place electronically on secondary market platform of NSE under automatic order matching mechanism in accordance with the settlement rules of the Stock Exchange. The transactions will be settled on trade-for-trade basis. Upon execution of the order, the stock broker will issue a contract note in accordance with the requirements of the Stock Exchange and SEBI.

Off Market Renunciation

The Eligible Unitholders may renounce the Rights Entitlements credited to their respective demat accounts by way of an offmarket transfer through a depository participant. The Rights Entitlements can be transferred in dematerialised form only.

Eligible Unitholders are requested to ensure that renunciation through off-market transfer is completed in such a manner that the Rights Entitlements are credited to the demat account of the Renouncees on or prior to the Issue Closing Date.

The Applicants holding the Rights Entitlements who desire to transfer their Rights Entitlements will have to do so through their depository participant by issuing a delivery instruction slip, the details of the buyer and the details of the Rights Entitlements they intend to transfer. The buyer of the Rights Entitlements (unless already having given a standing receipt instruction) has to issue a receipt instruction slip to their depository participant. The Applicants can transfer Rights Entitlements only to the extent of Rights Entitlements available in their demat account.

The instructions for transfer of Rights Entitlements can be issued during the working hours of the depository participants and only during the Renunciation Period. The detailed rules for transfer of Rights Entitlements through off-market transfer shall be as specified by the NSDL and CDSL from time to time.

In cases where multiple Application Forms are submitted for Applications pertaining to Rights Entitlements credited to the same demat account, such Applications shall be liable to be rejected.

Applicants are requested to strictly adhere to these instructions. Failure to do so could result in an Application being rejected, with the Trust, the Sponsor, the Investment Manager, the Trustee, the Lead Manager and the Registrar not having any liability to the Applicant.

Allotment of the Units in Dematerialized Form

Please note that the Units applied for in the Issue can be allotted only in dematerialized form and to the same depository account in which the Units are held by such investor on the Record Date.

Grounds for Technical Rejection

Applications made in the Issue are liable to be rejected on the following grounds:

(a) DP ID and Client ID mentioned in Application not matching with the DP ID and Client ID records available with the Registrar.
(b) Account holder not signing the Application or declaration mentioned therein.
(c) Submission of more than one application for Rights Entitlements available in a particular demat account.
(d) Submitting the GIR number instead of the PAN (except for Applications on behalf of the Central or State Government, the residents of Sikkim, the officials appointed by the courts and persons exempt from holding a PAN under applicable law).
(e) Applications by persons not competent to contract under the Indian Contract Act, 1872, except Applications by minors having valid demat accounts as per the demographic details provided by the Depositories.
(f) Application Forms which are not submitted by the Applicants within the time periods prescribed in the Application Form and this Letter of Offer.
(g) Physical Application Forms not duly signed by the sole or joint Applicants.
(h) Application Forms accompanied by stock invest, outstation cheques, post-dated cheques, money order, postal order or outstation demand drafts.
(i) If an Applicant is debarred by SEBI.
(j) Applications which: (i) appears to the Investment Manager or its agents to have been executed in, electronically transmitted from or dispatched from the United States or other jurisdictions where the offer and sale of the Units is not permitted under laws of such jurisdictions; (ii) does not include the relevant certifications set out in the Application Form, including to the effect that the person submitting and/or renouncing the Application Form is not in the United States and eligible to subscribe for the Units under applicable securities laws or; or (iii) where the Investment Manager believes acceptance of such Application Form may infringe applicable legal or regulatory requirements; and the Investment Manager shall not be bound to issue or allot any Units in respect of any such Application Form.
(k) Multiple application forms.

Depository account and bank details for Applicants holding Units in demat accounts and applying in the Issue

INVESTORS MUST ENSURE THAT THE NAME GIVEN IN THE APPLICATION FORM IS EXACTLY THE SAME AS THE NAME IN WHICH THE DEPOSITORY ACCOUNT IS HELD. IN CASE THE APPLICATION FORM IS SUBMITTED IN JOINT NAMES, IT SHOULD BE ENSURED THAT THE DEPOSITORY ACCOUNT IS ALSO HELD IN THE SAME JOINT NAMES AND ARE IN THE SAME SEQUENCE IN WHICH THEY APPEAR IN THE APPLICATION FORM.

Applicants applying under the Issue should note that on the basis of name of the Applicants, Depository Participant's name and identification number and beneficiary account number provided by them in the Application Form, the Registrar will obtain Demographic Details from the Depository. Hence, Applicants applying under the Issue should carefully fill in their Depository Account details in the Application.

These Demographic Details would be used for all correspondence with such Applicants including mailing of the letters intimating unblocking of bank account of the respective Applicant and/or refund. The Demographic Details given by the Applicants in the Application Form would not be used for any other purposes by the Registrar. Hence, Applicants are advised to update their Demographic Details as provided to their Depository Participants.

By signing the Application Forms, the Applicants would be deemed to have authorised the Depositories to provide, upon request, to the Registrar, the required Demographic Details as available on its records.

In case no corresponding record is available with the Depositories that match three parameters, (a) names of the Applicants, (b) the DP ID, and (c) the beneficiary account number, then such Application Forms are liable to be rejected.

Last date for Application

The last date for submission of the duly filled in the Application Form is 3.00 p.m. IST on March 21, 2024, being the Issue Closing Date. The Investment Manager will have the right to extend the Issue Period as it may determine from time to time, provided that the Issue will not remain open for a period longer than 15 Working Days.

Please ensure that the Application Form and necessary details are filled in. In place of Application number, Applicants can mention the reference number of the e-mail received from Registrar informing about their Rights Entitlement or last eight digits of the demat account.

Withdrawal of Application

No Applicant shall withdraw their Application post the Issue Closing Date.

Issue Schedule

Last date for credit of Rights Entitlements	Friday, March 15, 2024
Issue Opening Date	Tuesday, March 19, 2024
Last date for On-Market Renunciation of Rights Entitlements*	Tuesday, March 19, 2024
Issue Closing Date#@	Thursday, March 21, 2024
Finalization of Basis of Allotment	On or about Thursday, March 21, 2024
Date of Allotment	On or about Thursday, March 21, 2024
Date of Credit of Units	On or about Friday, March 22, 2024
Date of Listing	On or about Tuesday, March 26, 2024

* *Eligible Unitholders are requested to ensure that any renunciation is completed in such a manner that Rights Entitlements are credited to the demat accounts of the Renouncees on or prior to the Issue Closing Date.*
\# *The Investment Manager will have the right to modify the Issue Period as it may determine from time to time, provided that the Issue will open for a period of at least three Working Days and will not remain open for a period longer than 15 Working Days.*
@*On the Issue Closing Date, Application Forms and Application Amount shall be accepted until 3.00 p.m. IST.*

VI. Basis of Allotment

Subject to the provisions contained in this Letter of Offer, the Rights Entitlement Letter, the Application Form, the Indenture of Trust and the approval of the Designated Stock Exchange, the Investment Manager will proceed to Allot the Units in the following order of priority:

(a) Full allotment to those Eligible Unitholders who have applied for their Rights Entitlement either in full or in part and also to the renouncee(s), who has/have applied for the Units renounced in their favour, in full or in part, as adjusted for fractional entitlement.;

(b) Allotment to Eligible Unitholders who having applied for the Units in full to the extent of their Rights Entitlement and have also applied for additional Units shall be made as far as possible on an equitable basis, having due regard to the number of Units held by them on the record date, provided there is an undersubscribed portion after making allotment in (a) above;

(c) Allotment to the Renouncees, who having applied for the Units renounced in their favour and also applied for additional Units, provided there is an undersubscribed portion after making full allotment specified in (a) and (b) above. The allotment of such additional Units may be made on a proportionate basis;

(d) Allotment to the Sponsor and its associates who are Eligible Unitholders and who have disclosed their intent to subscribe to additional Units, if there is an unsubscribed portion after making full allotment specified in (a), (b) and (c) above (in this regard see "*Other Regulatory and Statutory Disclosures – Participation by the Sponsor*" on page 720); and

(e) Allotment to the underwriter appointed for the Issue, if any, at the discretion of the board of directors of the Investment Manager, subject to disclosure in this Letter of Offer.

The Units allotted in the manner specified above shall be listed within six Working Days from the Issue Closing Date, or such other timeline as may be prescribed under Applicable Law.

VII. Allotment Advice or Refund

The Investment Manager will email Allotment Advice, refund intimations or demat credit of securities and/or letters of regret, along with crediting the Allotted Units to the respective beneficiary accounts (only in dematerialised mode), if any, within a period of 15 days from the Issue Closing Date. In case of failure to do so, the Investment Manager and the Trustee shall pay interest at such rate as specified under applicable law.

The Rights Entitlements will be credited in the dematerialized form using electronic credit under the depository system and the Allotment Advice shall be sent, through email, to the email address provided to the Investment Manager or at the address recorded with the Depository.

In the case of non-resident Applicants who remit their Application Amount from funds held in the NRE or the FCNR Accounts, refunds and/or payment of interest or dividend and other disbursements, if any, shall be credited to such accounts.

Payment of Refund

The payment of refund, if any, including in the event of oversubscription or failure to list or otherwise would be done through electronic mode or such other modes as may be permitted under applicable law.

Dematerialized Credit of Units

The demat credit of Units to the respective beneficiary accounts will be credited within the timelines required under applicable laws.

Applicants shall be Allotted the Units in dematerialized (electronic) form. The Investment Manager and the Registrar have entered into:

- Agreement dated January 14, 2020 with NSDL; and
- Agreement dated January 16, 2020 with CDSL.

The Investment Manager shall file an allotment report with the SEBI providing details of the Allottees and the Allotment made within 15 days of the Issue Closing Date.

INVESTORS MAY PLEASE NOTE THAT THE UNITS CAN BE TRADED ON THE STOCK EXCHANGE ONLY IN DEMATERIALIZED FORM.

IMPORTANT

1. Please read this Letter of Offer carefully before taking any action. The instructions contained in the Application Form and the Rights Entitlement Letter are an integral part of the conditions of this Letter of Offer and must be carefully followed; otherwise the Application is liable to be rejected.

2. All enquiries in connection with this Letter of Offer, the Rights Entitlement Letter or Application Form must be addressed (quoting the Registered Folio Number or the DP ID and Client ID number, the Application Form number and the name of the first Eligible Unitholder as mentioned on the Application Form and postmarked in India or in the e-mail) to the Registrar at the following address:

   KFin Technologies Limited
   B, Plot No. 31 &32 Gachibowli Financial District, Nanakramguda
   Hyderabad 500 032, Telangana
   Attention: M. Murali Krishna
   E-mail: einward.ris@kfintech.com

The Investment Manager will have the right to modify the Issue Period as it may determine from time to time, provided that the Issue will remain open for at least three Working Days and will not remain open for a period longer than 15 Working Days.

SECTION X – OTHER INFORMATION

MATERIAL CONTRACTS AND DOCUMENTS FOR INSPECTION

The following contracts, which are or may be deemed material have been entered into among the relevant parties. These contracts and also the documents for inspection referred to hereunder, may be inspected by Eligible Unitholders at the office of the Trust at New Delhi, from 10:00 A.M. to 5:00 P.M., from the date of this Letter of Offer until the Issue Closing Date, on Working Days.

A. Material Contracts

1. Issue agreement dated March 12, 2024 among the Trustee (on behalf of the Trust), the Investment Manager and the Lead Manager;

2. Registrar agreement dated March 12, 2024 among the Trustee (on behalf of the Trust), the Investment Manager and the Registrar to the Issue;

3. Cash escrow agreement dated March 12, 2024 among the Trustee (on behalf of the Trust), the Investment Manager, the Lead Manager and the Escrow Collection Bank;

4. The Framework Agreement, among the Sponsor, the Investment Manager, Bricklayers Investment Pte. Ltd, Chiswick Investments Pte. Ltd, Dangenham Investment Pte. Ltd, Anahera Investment Pte. Ltd and Stretford End Investment Pte. Ltd., dated August 6, 2019, as amended;

5. The Indenture of Trust, between the Sponsor and the Trustee, dated August 27, 2019, as amended;

6. The Investment Management Agreement, among the Trustee and the Investment Manager, dated August 27, 2019, as amended;

7. The name licensing agreement among the Sponsor, the Trustee (on behalf of the Trust), the Investment Manager and each of the Project SPVs dated February 13, 2020, as amended.

8. Shareholders’ agreement dated August 6, 2019, as amended, among the Sponsor, Croxley and the Investment Manager, as amended;

9. The concession agreement between AETL and NHAI dated September 1, 2015, together with any amendments or supplements thereto;

10. The concession agreement between CGTL and NHAI dated December 9, 2016, together with any amendments or supplements thereto;

11. The concession agreement between IRB HMTL and NHAI dated May 29, 2018, together with any amendments or supplements thereto;

12. The concession agreement between IRB WTL and NHAI dated March 25, 2013, together with any amendments or supplements thereto;

13. The concession agreement between KGTL and NHAI dated February 22, 2018, together with any amendments or supplements thereto;

14. The concession agreement between KTL and NHAI dated June 23, 2014, together with any amendments or supplements thereto;

15. The concession agreement between SYTL and NHAI dated March 3, 2014, together with any amendments or supplements thereto;

16. The concession agreement between UTL and NHAI dated December 9, 2016, together with any amendments or supplements thereto;

17. The concession agreement between YATL and NHAI dated May 30, 2014, together with any

amendments or supplements thereto;

18. The concession agreement between PDTPL and NHAI dated June 14, 2021, together with any amendments or supplements thereto;

19. The concession agreement among IRB GEPL, HMDA, HGCL and the Sponsor dated May 26, 2023, together with any amendments or supplements thereto;

20. The concession agreement between STPL and the NHAI dated May 12, 2023, together with any amendments or supplements thereto;

21. The concession agreement between IRB LTPL and the NHAI dated November 24, 2023, together with any amendments or supplements thereto;

22. The concession agreement between IRB GTPL and the NHAI dated January 12, 2024, together with any amendments or supplements thereto;

23. The concession agreement between IRB KTPL and the NHAI dated January 12, 2024, together with any amendments or supplements thereto;

24. The Project Implementation Agreements, each dated February 3, 2020, among the Trustee (on behalf of the Trust), the Investment Manager, the Project Manager and each of the Project SPVs (except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL), as amended; the project implementation agreement dated May 19, 2022 among the Trustee (on behalf of the Trust), the Investment Manager, the Project Manager and PDTPL; the project implementation agreement dated August 2, 2023 among the Trustee (on behalf of the Trust), the Investment Manager, the Project Manager and IRB GEPL; and the project implementation agreement dated October 12, 2023 among the Trustee (on behalf of the Trust), the Investment Manager, the Project Manager and STPL;

25. The Debt Novation Agreements dated February 19, 2020, as amended;

26. The Project SPV Shareholder Loan Agreements dated February 19, 2020 (for all Project SPVs except PDTPL, IRB GEPL, STPL, IRB LTPL, IRB KTPL and IRB GTPL), April 7, 2022 (for PDTPL), July 29, 2023 (for IRB GEPL) and October 12, 2023 (for STPL);

27. The IRB LTPL Share Subscription Agreement;

28. The IRB LTPL Shareholder Loan Agrement;

29. The IRB LTPL Project Implementation Agreement;

30. The IRB GTPL Share Subscription Agreement;

31. The IRB GTPL Shareholder Loan Agrement;

32. The IRB GTPL Project Implementation Agreement;

33. The IRB KTPL Share Subscription Agreement;

34. The IRB KTPL Shareholder Loan Agrement; and

35. The IRB KTPL Project Implementation Agreement.

B. Material Documents

1. Certificate of registration of the Trust as an infrastructure investment trust dated November 25, 2019 issued by the SEBI and letter dated January 30, 2020 issued by the SEBI;

2. The resolutions of the board of directors of the Investment Manager dated March 5, 2024, March 8,

2024, March 13, 2024 and March 14, 2024 in connection with the Issue;

3. Consent of the Auditors in relation to the statement of tax benefits dated March 11, 2024, the reports on the Consolidated Financial Statements and the reports on the Standalone Financial Statements;

4. Consent of the Lead Manager, Registrar, Traffic Consultant, Escrow Collection Bank, legal counsel and the Compliance Officer;

5. Consent of the Valuer in relation to the TOT-12 and TOT-13 Valuation Reports included in this Letter of Offer;

6. The letter from the NHAI dated January 3, 2020 in connection with the transfer of the Project SPVs to the Trust and other matters;

7. Tripartite Agreement dated January 14, 2020, among the Investment Manager (on behalf of the Trust), NSDL and the Registrar and Unit Transfer Agent;

8. Tripartite Agreement dated January 16, 2020, among the Investment Manager (on behalf of the Trust), CDSL and the Registrar and the Unit Transfer Agent;

9. Letter dated January 23, 2024 issued by the SEBI; and

10. In-principle listing approval dated March 13, 2024 issued by the NSE.

Any of the contracts or documents mentioned in this Letter of Offer may be amended or modified at any time if so required in the interest of the Trust or if required by the other parties, without reference to the Unitholders, subject to compliance with applicable law.

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Virendra D. Mhaiskar
Non-independent Director
Date: March 14, 2024
Place: Mumbai

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Kunnasagaran Chinniah
Non-independent Director
Date: March 14, 2024
Place: Singapore

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Boon Chin Hau
Non-independent Director
Date: March 14, 2024
Place: Singapore

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Aryan Mhaiskar
Non-independent Director
Date: March 14, 2024
Place: London

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. K G Krishnamurthy
Independent Director
Date: March 14, 2024
Place: Mumbai

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mrs. Ranjana Paranjape
Independent Director
Date: March 14, 2024
Place: Mumbai

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Nagendraa Parakh
Independent Director
Date: March 14, 2024
Place: Mumbai

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Amyn Jassani
Independent Director
Date: March 14, 2024
Place: Mumbai

DECLARATION

The Trustee (on behalf of the Trust) hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Trustee (on behalf of the Trust) further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE TRUSTEE (ON BEHALF OF THE TRUST)

For **IDBI Trusteeship Services Limited**
Authorized Signatory
Date: March 14, 2024
Place: Mumbai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Virendra D. Mhaiskar
Chairman and Managing Director
Date: March 14, 2024
Place: Mumbai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mrs. Deepali V. Mhaiskar
Whole-time Director
Date: March 14, 2024
Place: Mumbai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Jose Tamariz Martel Goncer
Non-Executive Director
Date: March 14, 2024
Place: Madrid, Spain

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Ravindra Dhariwal
Non-Executive Director
Date: March 14, 2024
Place: New Delhi

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Sunil Talati
Independent Director
Date: March 14, 2024
Place: Ahmedabad

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Chandrashekhar S. Kaptan
Independent Director
Date: March 14, 2024
Place: Nagpur

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Sandeep J. Shah
Independent Director
Date: March 14, 2024
Place: Mumbai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Ms. Priti Savla
Independent Director
Date: March 14, 2024
Place: Mumbai

ANNEXURE A

TRAFFIC REPORTS

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IRB INFRASTRUCTURE TRUST

AGRA TO ETAWAH (KM 199.660 TO KM 323.525) SECTION OF NH-2 IN THE STATE OF UTTAR PRADESH.

MARCH 2024

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

GMD CONSULTANTS NAVI MUMBAI

GMD Consultants

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GMD Adding Value

AGRA TO ETAWAH (KM 199.660 TO KM 323.525) SECTION OF NH-2 IN THE STATE OF UTTAR PRADESH.

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

MARCH 2024

GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic
BOT	-	Build Operate Transfer
CAGR	-	Compound Annual Growth Rate
CTV	-	Classified traffic volume
DBFOT	-	Design, Build, Finance, Operate & Transfer
EME	-	Earth Moving Equipment
GDP	-	Gross Domestic Product
GSDP	-	Gross State Domestic Product
HCM	-	Heavy Construction Machinery
HCV	-	Heavy Commercial Vehicle
HTMS	-	Highway Traffic Management System
IRC	-	Indian Road Congress
IRR	-	Internal Rate of Return
LCV	-	Light Commercial Vehicle
LHS	-	Left Hand Side
LGV	-	Light Goods Vehicle
MAV	-	Multi Axle Vehicle
MORTH	-	Ministry of Road Transport and Highways
NH	-	National Highway
PCC	-	Plain Cement Concrete
CR	-	Coarse Rubble
NHAI	-	National Highway Authority of India
NHDP	-	National Highways Development Project
NSDP	-	Net State Domestic Product
O&M	-	Operation & Maintenance
PCDP	-	Per Capita Domestic Product
PCI	-	Per Capita Income
PCU	-	Passenger Car Unit
PSC	-	Pre-stressed Concrete
RCC	-	Reinforced cement concrete
RHS	-	Right Hand Side
SH	-	State Highway
TP	-	Toll Plaza
WPI	-	Wholesale Price Index
SIR	-	Special Investment Region
c.	-	Circa
ROB	-	Railway Over Bridge
MDR	-	Major District Road
ODR	-	Other District Road
CA	-	Concession Agreement
RMT	-	Running Meter

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, **Agra** to **Etawah** section of NH-2 from km 199.660 to km 323.525is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s AE Tollway. Ltd*. (Concessionaire) has been awarded the Project for a concession period of 24 years starting from 1st August 2016. The Project has been commissioned and is currently in the operation / maintenance phase. Six Laning of project has also been completed in Nov 2020.

Length of project road is 123.865 Kms. The project road is section of NH-2, which starts from Delhi and ends at Kolkata and is a part of the Golden Quadrilateral Project. The project road section passes through the districts of Agra, Firozabad and Etawah.

Project road alignment passes through the towns/ built-up areas of Tundla, Firozabad, Shikohabad, Sirsaganj, & Jaswantnagar. The following figure shows alignment of project road section from Agra to Etawah.

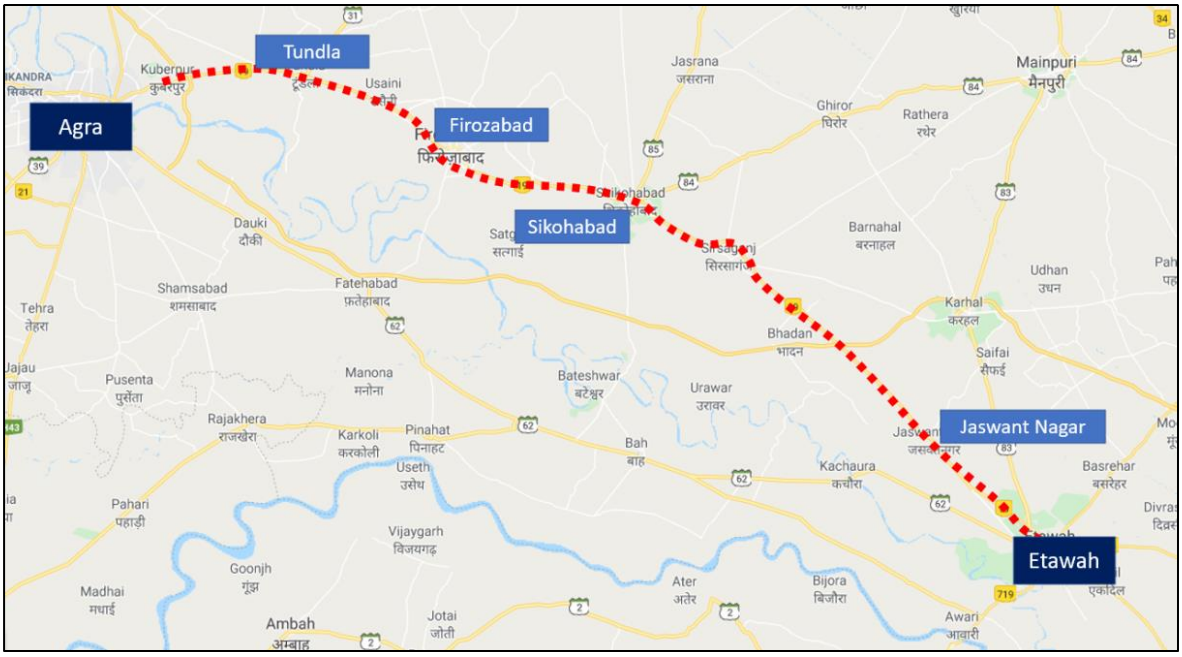

Figure 1-1: Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study &*Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 2 (NH 2) which is now renumbered as NH-19 is oldest highway in India and connects state of Delhi, Haryana, Uttar Pradesh, Bihar, Jharkhand and West Bengal. It constitutes a major portion of the historical grand truck road.

It connects the national capital Delhi to Kolkata, as well as important cities Mathura, Agra, Kanpur, Allahabad, Varanasi, Dhanbad, Asansol, Durgapur and Bardhman. The highway is part of the Golden Quadrilateral project undertaken by National Highways Authority of India (NHAI).

The project road is a link between Agra and Kanpur in the state of Uttar Pradesh. The main project influence area of the project road consists of the three districts through which the project road passes. In addition, the project influence area includes the districts of Kanpur, Mathura and Aligarh also.

2.2 Project Stretch Description

Section of NH-2 from Agra to Etawah is part of the major transportation link in the area connecting industrial cities of Agra- Kanpur and Lucknow. Important cities of Firozabad, Shikohabad, and Jaswant Nagar fall on project alignment. Firozabad has a famous glass work industry. Like other parts of India rapid ribbon development is happening around these cities on project highway. This also contributes to sustainable traffic growth.

There are two operative toll plazas at project stretch. The first is at Tundla at Km 224.950 and second at Gurau at Km 285.200. The following figure shows project alignment and toll plaza locations.

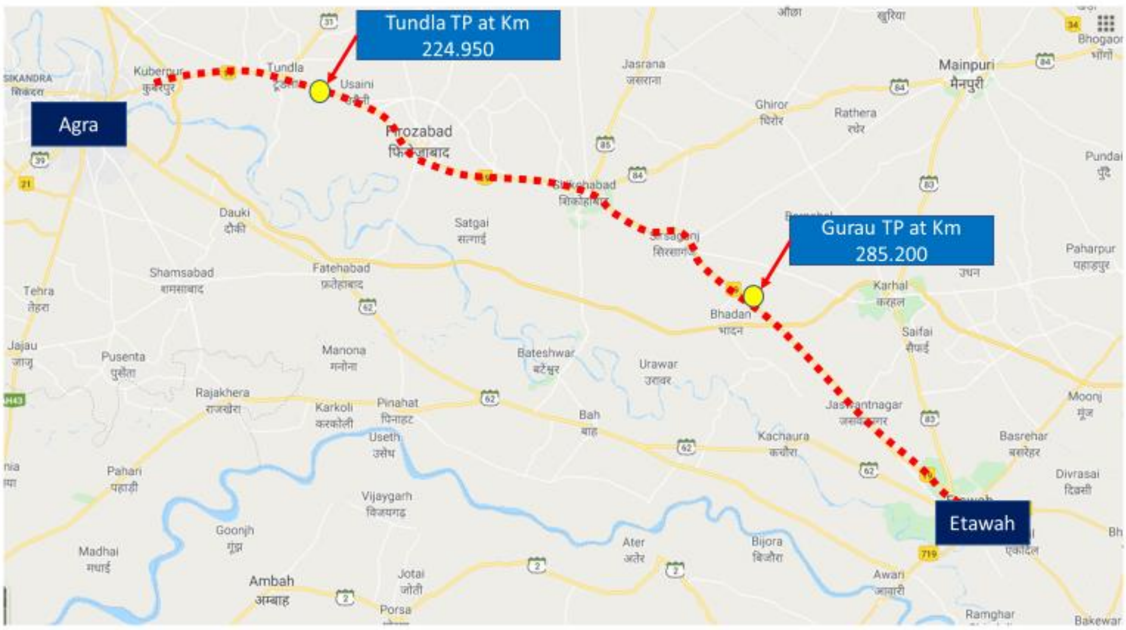

Figure 2-1: Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is complete. The following photographs illustrate the project section along the corridor.

Figure 2-2: Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Agra- Etawah section of NH-2 for years 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22,22-23 and traffic data from April 2023 to November 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 224.950 Toll Plaza at Tundla	AADT for Year 2017-18, 2018-19, 2019-20,2020-21 ,2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November	For Year 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November	For Year 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November	For Year 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
			2023	2023	2023	2023
2	Km 285.200 Toll Plaza at Gurau	AADT for Year 2017-18, 2018-19, 2019-20,2020-21 ,2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2017-18, 2018-19, 2019-20, 2020-21,2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2017-18, 2018-19, 2019-20, 2020-21,2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2017-18, 2018-19, 2019-20, 2020-21,2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22, 2022-2023 & Eight month from April 2023 to November 2023

Toll plaza no. 1 & 2 are located in Uttar Pradesh.

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)

Vehicle Type	
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Bus
- Truck
- 3-Axle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23 and from April 2023 to November 2023.
Since the traffic data available for this update is for only eight months, from April 2023 to November 20223, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current eight months to arrive at Annual Average Daily Traffic of base year 2023-24. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and Annual Average Daily Traffic (AADT) for year 2023-24.

Table 3-3 : Traffic Data at Gurau Toll Plaza at Km 285.200

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	2071	3535	5268	3371	3525
2	LCV	1097	1286	919	748	742

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
3	Bus	494	492	635	530	559
4	Truck	891	1100	1351	1410	1532
5	3-Axle	901	909	882	839	826
6	Multi Axle	1426	1760	2138	2386	2685
7	Oversize Vehicle	11	8	4	10	10
	Total	**6892**	**9090**	**11197**	**9292**	**9880**

Table 3-4 : Traffic Data at Tundla Toll Plaza at Km 224.950

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	8324	5849	7347	8954	9575
2	LCV	1917	1514	1012	1082	1067
3	Bus	1148	777	856	1181	1328
4	Truck	1309	1272	1506	1775	1957
5	3-Axle	955	948	924	887	879
6	Multi Axle	1255	1725	2179	2372	2764
7	Oversize Vehicle	10	11	8	10	10
	Total	**14918**	**12096**	**13832**	**16260**	**17580**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in Table 3-5.

Table 3-5 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-6 : Traffic in PCU at Project Stretch Base Year 2023-24

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-2020	Gurau Km 285.200	6892	17043	2.47
	Tundla Km 224.950	14918	27128	1.82

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2020-2021	Gurau Km 285.200	9090	20922	2.30
	Tundla Km 224.950	12096	24923	2.06
2021-2022	Gurau Km 285.200	11197	24889	2.22
	Tundla Km 224.950	13832	28565	2.07
2022-2023	Gurau Km 285.200	9292	23606	2.54
	Tundla Km 224.950	16260	32820	2.02
2023-2024	Gurau Km 285.200	9880	25521	2.58
	Tundla Km 224.950	17580	36151	2.06

It can be observed from above that project traffic has PCU index close to 2.5 at Guarau which is an indicator of high proportion of commercial traffic in traffic mix. At Tundla the index is more toward passenger traffic due to urban impact. The following figure illustrates variation of PCU index at two toll plaza locations.

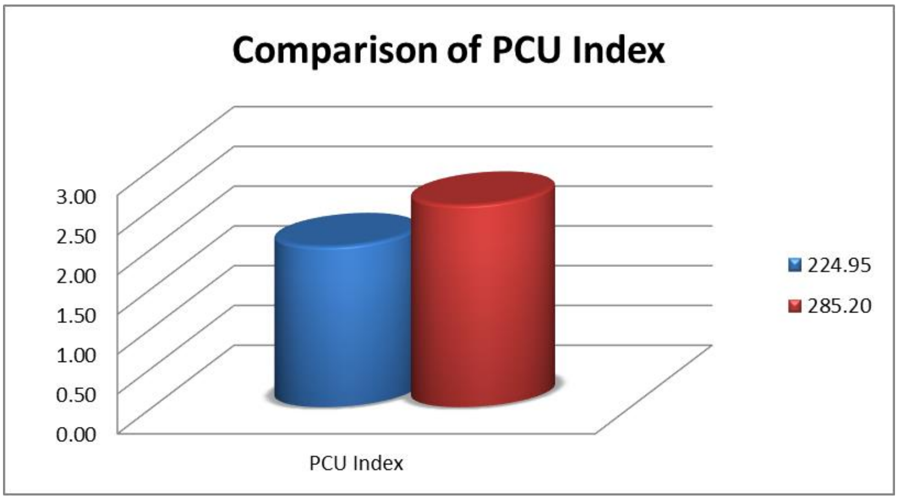

Figure 3-1: Comparison of PCU Index

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

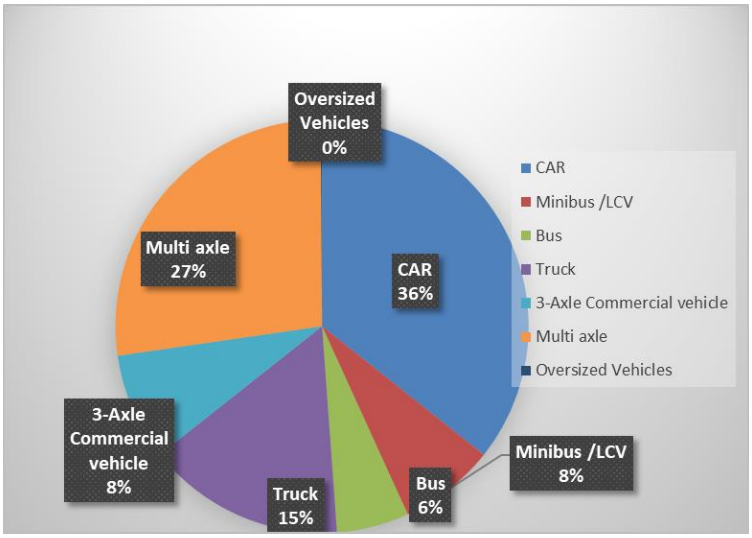

Figure 3-2 :Model Split of Tollable Vehicle-Km 285.200

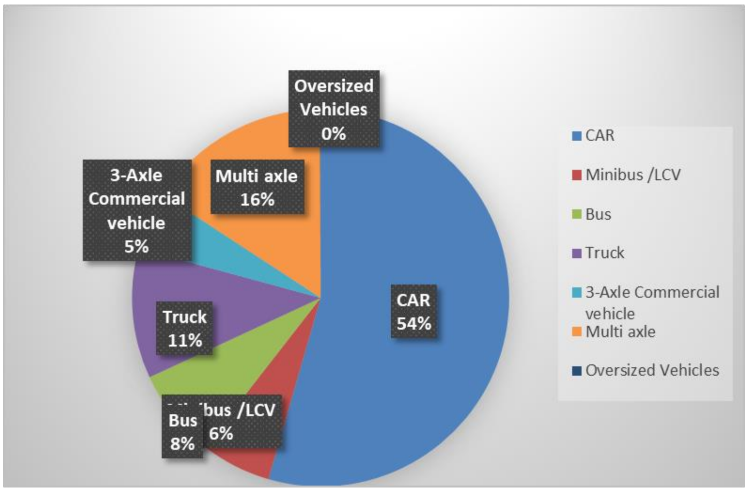

Figure 3-3 :Model Split of Tollable Vehicle-Km 224.950

It is observed that car traffic forms about 36% of total traffic at Gurau toll plaza location while multi axle commercial vehicles and trucks are about 64% of total traffic.

While at Tundla toll plaza car share rises to 54% and commercial vehicles multi axle and trucks share about 46%. This is due to the presence of strong urban impact of Tundla.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2023-24

Table 3-7 : Journey Type Bifurcation of Traffic at Gurau Toll Plaza KM 285.200

Sr. No	Type	Traffic Volume (Nos.)
		2023-24
1	Single Journey	6839
2	Return Journey	3006
3	Local Commercial Single Journey	19
4	Monthly Pass Local	9
5	Monthly Pass	7

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 69%. Return journey component is 31%.

The following tables give the details of journey distribution at Tundla toll plaza at Km 224.950.

Table 3-8 : Journey Type Bifurcation of Traffic at Tundla Toll Plaza KM 224.950

Sr. No	Type	Traffic Volume (Nos.)
		2023-24
1	Single Journey	8627
2	Return Journey	8671
3	Local Commercial Single Journey	94
4	Monthly Pass Local	169
5	Monthly Pass	20

At Tundla toll plaza single journey share drops to 49% while return share is 49% respectively. Monthly pass is 0% and Local 2%.

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
    a) GDP
    b) NSDP
    c) Population Growth
    d) Per Capita Income growth
    e) Industrial Growth
    f) Special Industry Potential
    g) Regional and National development vision / plan
    h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch has toll application history from last few years, and it can be assumed that project traffic is settled. However, from an analysis point of view there can be one alternate route using Agra Lucknow Expressway at local level.

At the regional level, this route connects Delhi to Kanpur and then goes towards Pryagraj and West Bengal. Most obvious alternate route is through Lucknow – Agra Expressway again.

The following maps show these routes in relation to project stretches at both local and regional level.

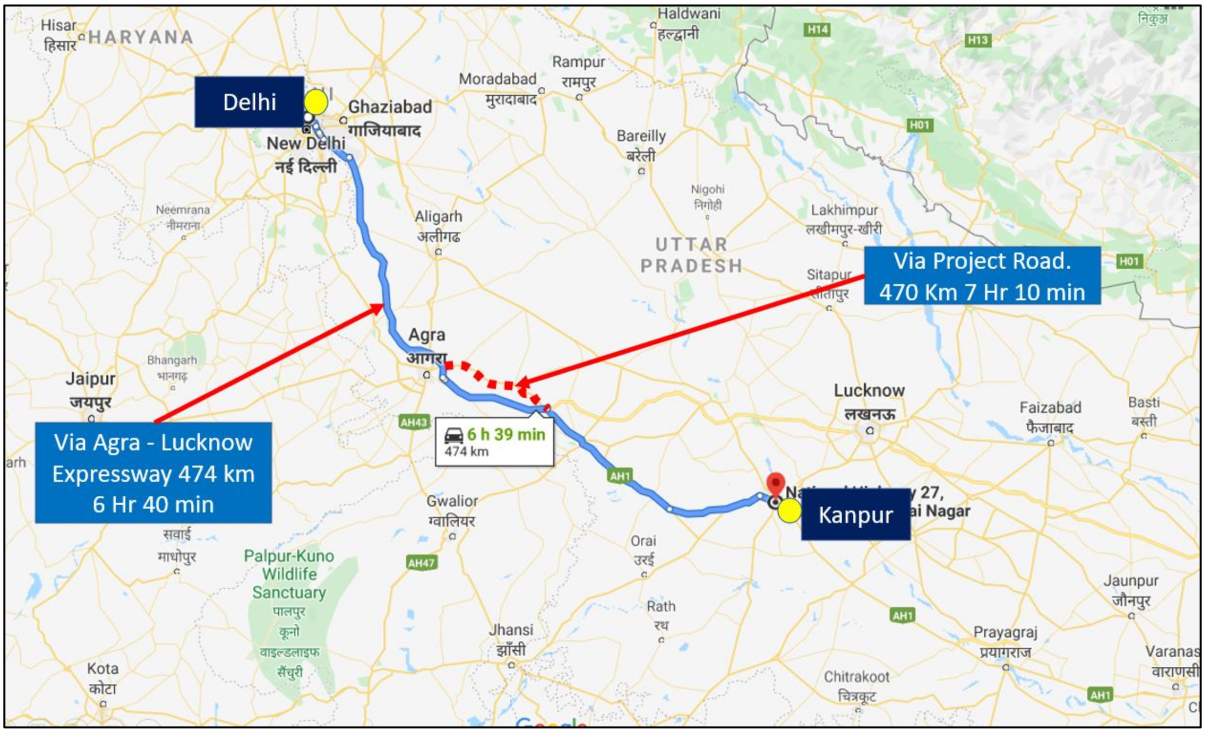

Figure 4-1: Alternate route at regional level.

Figure 4-2: Alternate route at local level.

It can be observed that the project highway forms one of the main spines of the corridor between Agra and Etawah. Agra – Lucknow Expressway is a faster connectivity for obvious regions. It's been in operation for the last few years and most of the traffic which had potential of diversion had done so. Traffic on project road is now settled and it can be assumed as dedicated traffic on project road for logistic obligations. With six laning now complete, project stretch has become slightly more attractive due to the improved level of service.

At regional level also the difference between two alignment is only of Agra- Lucknow Expressway. Hence there too, regional level traffic is expected to have settled.

The following table provides summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Delhi to Kanpur Via Agra- Lucknow Expressway	Alternate Route	474	70	6 Hr 40 Min	Alternate route running for years after toll on project road. Traffic Settled. No further diversion expected
	Delhi to Kanpur Via Project Road (NH-19)	Project Road	470	65	7 Hr 10 Min	
Local Level						
2	Agra to Etawah Via Agra- Lucknow Expressway	Alternate Route	123	65	1 Hr. 52 Min	Alternate route running for years after toll on project road. Traffic Settled. No further diversion expected
	Agra to tawah Via Project Road (NH-19)	Project Road	129	50	2 Hr. 30 Min	

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. Further, it may be noted that during its construction phase, the project road had many bottlenecks like Firozabad bypass etc. Due to this part of traffic preferred Agra Lucknow expressway over project road despite higher toll tariff at Agra – Lucknow Expressway. Now as these bottlenecks are removed it is expected that some part of traffic would return to Project Corridor due to improved level of service and low toll fee as compared to Agra – Lucknow Expressway.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Surat- Dahisar section of NH-8has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP
-

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = k x Log (EI) + A

Where,

P = Number of Vehicles (Mode wise)

EI = Economic Indicator

A = Regression constant

k = Elasticity coefficient (Regression coefficient)

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across the state of Uttar. Toll plazas at Tunda and Gurau are in the state of Uttar Pradesh. Project corridor has certain impact of traffic from Delhi, and Haryana also. For elasticity calculations, working data from these states has been analyzed.

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Uttar Pradesh State.

Table 5-1 : Per Capita Income Vs Car Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	32002	1108100	4.51	6.04		
2013	32908	1205374	4.52	6.08	3%	
2014	34044	1423020	4.53	6.15	3%	
2015	34583	1572217	4.54	6.20	2%	
2016	36973	1746117	4.57	6.24	7%	
2017	40641	2027972	4.61	6.31	10%	4.94%

Regression analysis of same is given in figure below.

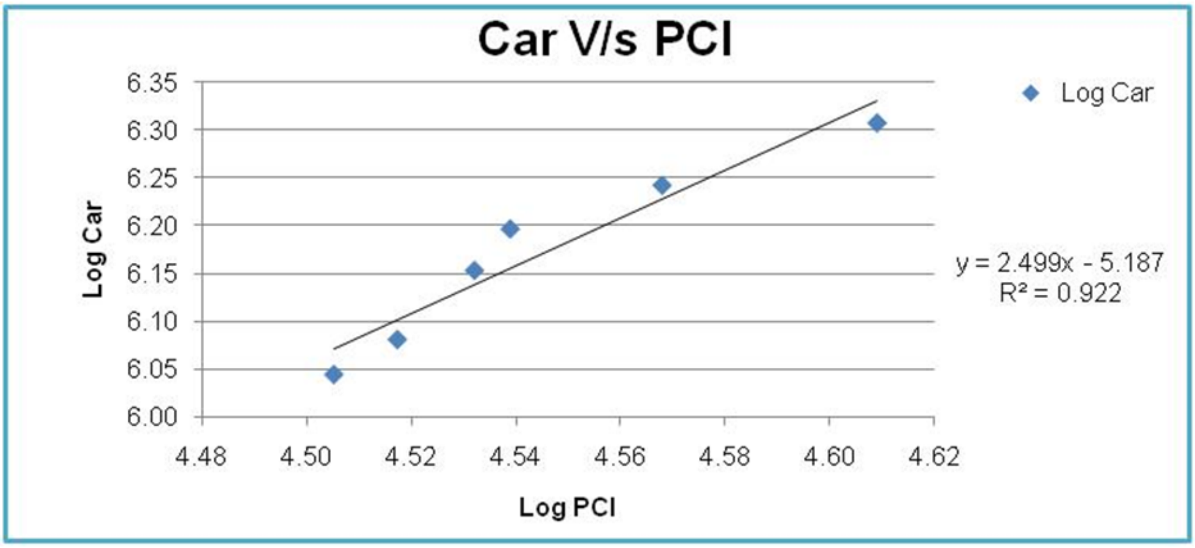

Figure 5-1: Regression and Elasticity PCI vs. Car–Extrapolation Uttar Pradesh

Table 5-2 : Population Vs Bus Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	199812341	57901	8.30	4.76		
2013	203382046	64147	8.31	4.81	2%	
2014	206942855	74389	8.32	4.87	2%	
2015	210493544	80460	8.32	4.91	2%	
2016	214032922	89127	8.33	4.95	2%	
2017	217559836	112020	8.34	5.05	2%	1.72%

Regression analysis of same is given in figure below.

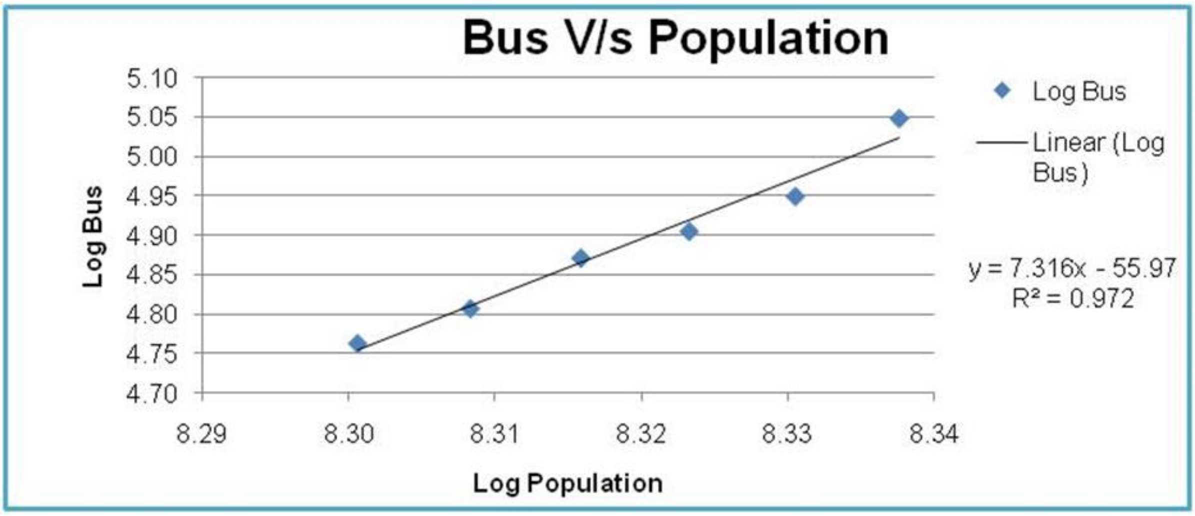

Figure 5-2: Regression and Elasticity Population vs. Bus – Extrapolation Uttar Pradesh

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Uttar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	645132	176164	5.81	5.25		
2013	673552	213657	5.83	5.33	4%	
2014	707469	265025	5.85	5.42	5%	
2015	729686	294022	5.86	5.47	3%	
2016	792049	316815	5.90	5.50	9%	5.28%

The following figure depicts regression analysis and extrapolation.

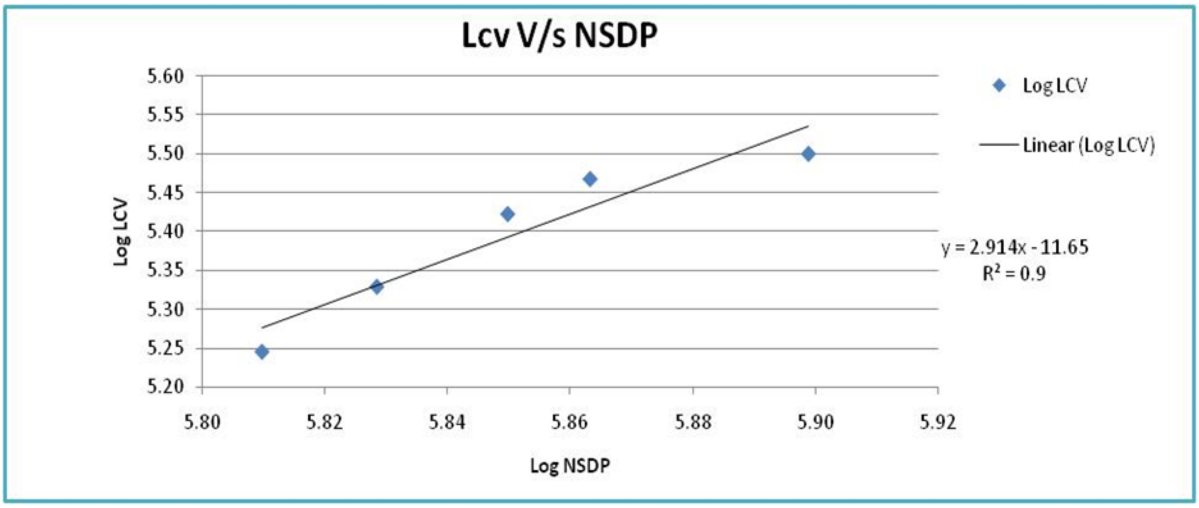

Figure 5-3: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Uttar Pradesh.

Table 5-4 : Truck Traffic Vs NSDP Uttar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	645132	162813	5.81	5.21		
2013	673552	186404	5.83	5.27	4%	
2014	707469	202761	5.85	5.31	5%	
2015	729686	217609	5.86	5.34	3%	
2016	792049	245688	5.90	5.39	9%	
2017	883962	265167	5.95	5.42	12%	6.55%

The following figure depicts regression analysis and extrapolation.

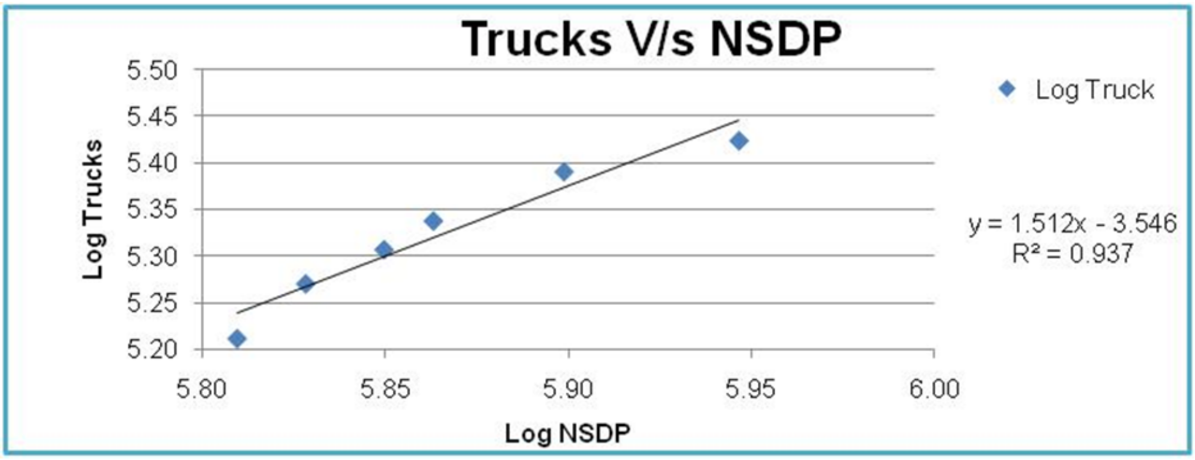

Figure 5-4: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Uttar Pradesh.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-5 : Summary Regression Analysis Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Uttar Pradesh	Car/Jeep	PCI	y = 2.499x + -5.1874	R² = 0.922	2.4990	4.94%	12.34%	Good Regression
	Bus	Population	y = 7.3167x - - 55.9791	R² = 0.9726	7.3167	1.72%	12.56%	Good Regression
	LCV	NSDP	y = 2.9149x - - 11.6585	R² = 0.9	2.9149	5.28%	15.40%	Good Regression
	Truck	NSDP	y = 1.5121x - - 3.5463	R² = 0.9373	1.5121	6.55%	9.90%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Delhi State.

Table 5-6 : Per Capita Income Vs Car Delhi

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	185361	2172069	5.27	6.34		
2013	193175	2416974	5.29	6.38	4%	

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2014	202216	2568380	5.31	6.41	5%	
2015	215726	2730071	5.33	6.44	7%	
2016	235737	2986579	5.37	6.48	9%	
2017	247255	3061817	5.39	6.49	5%	5.95%

Regression analysis of same is given in figure below.

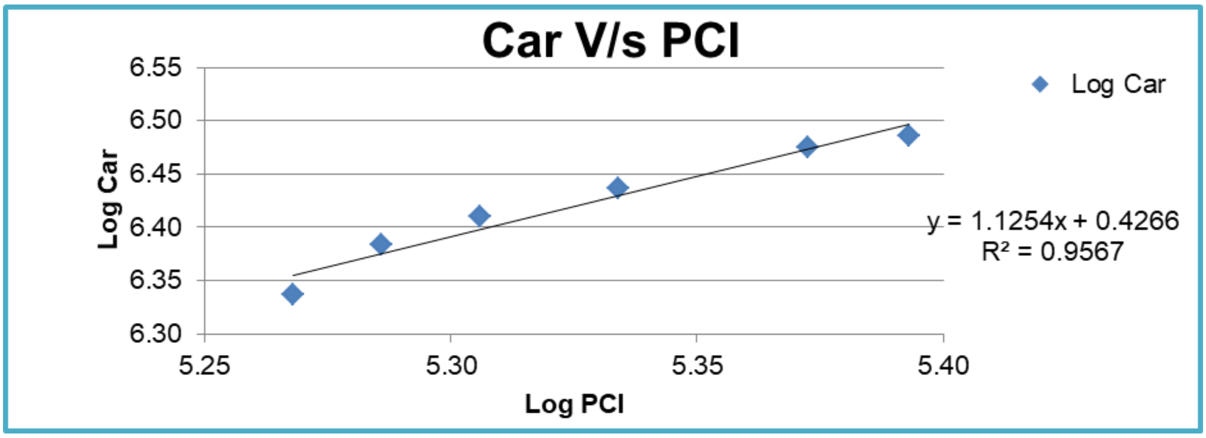

Figure 5-5: Regression and Elasticity PCI vs. Car–Extrapolation Delhi

Table 5-7 : Population Vs Bus Delhi

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	16787941	109790	7.22	5.04		
2013	17071599	19917	7.23	4.30	2%	
2014	17354281	19595	7.24	4.29	2%	
2015	17635897	19700	7.25	4.29	2%	
2016	17916359	43723	7.25	4.64	2%	
2017	18195583	41686	7.26	4.62	2%	1.62%

Regression analysis of same is given in figure below.

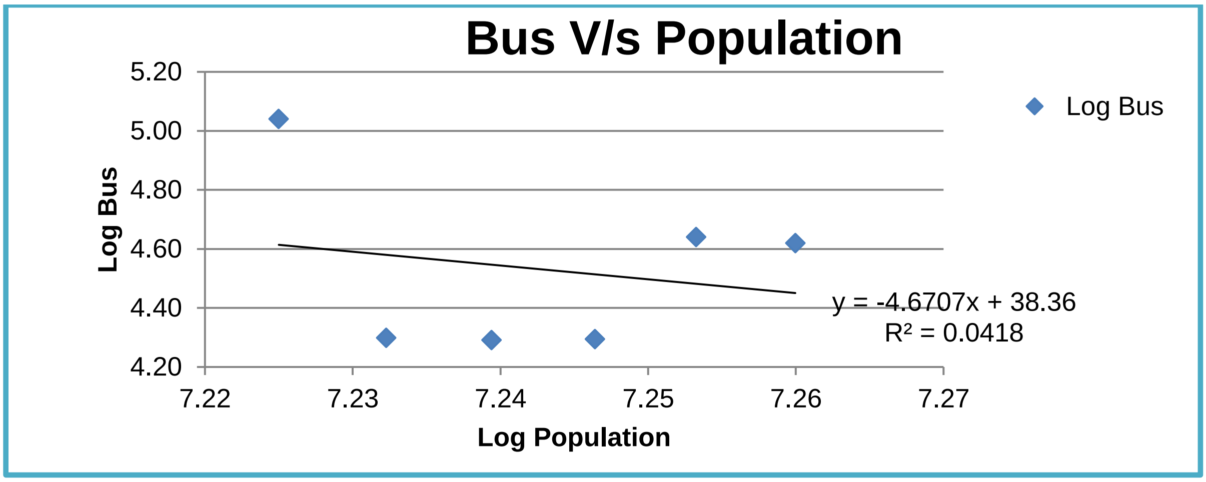

Figure 5-6: Regression and Elasticity Population vs. Bus – Extrapolation Delhi

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Delhi

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	314650	124547	5.50	5.10		
2013	334193	126539	5.52	5.10	6%	
2014	356528	136110	5.55	5.13	7%	
2015	387639	145903	5.59	5.16	9%	
2016	431730	183486	5.64	5.26	11%	
2017	461476	221068	5.66	5.34	7%	7.98%

The following figure depicts regression analysis and extrapolation.

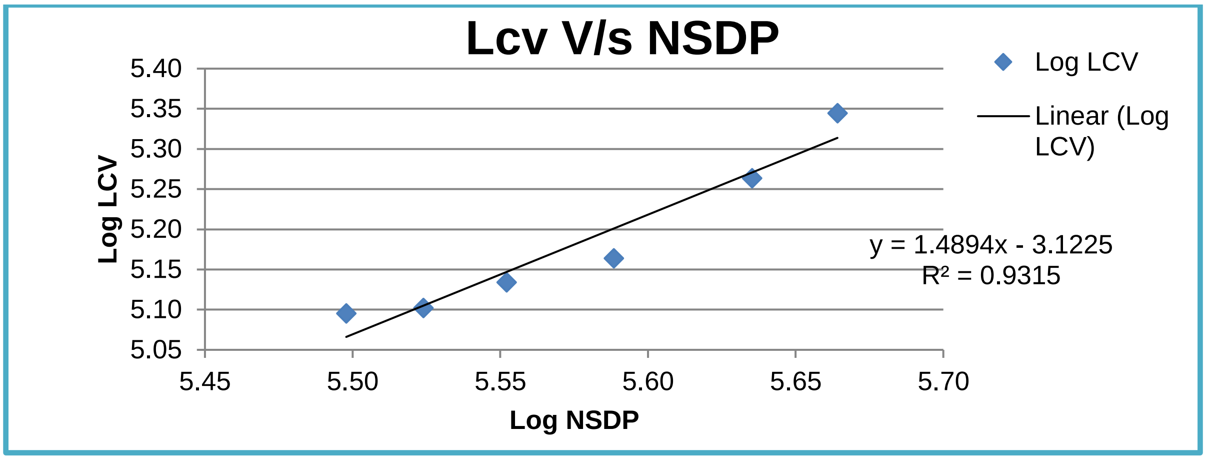

Figure 5-7: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Delhi.

Table 5-9 : Truck Traffic Vs NSDP Delhi

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	314650	4792	5.50	3.68		
2013	334193	5176	5.52	3.71	6%	
2014	356528	6093	5.55	3.78	7%	
2015	387639	7503	5.59	3.88	9%	
2016	431730	8703	5.64	3.94	11%	
2017	461476	10440	5.66	4.02	7%	7.98%

The following figure depicts regression analysis and extrapolation.

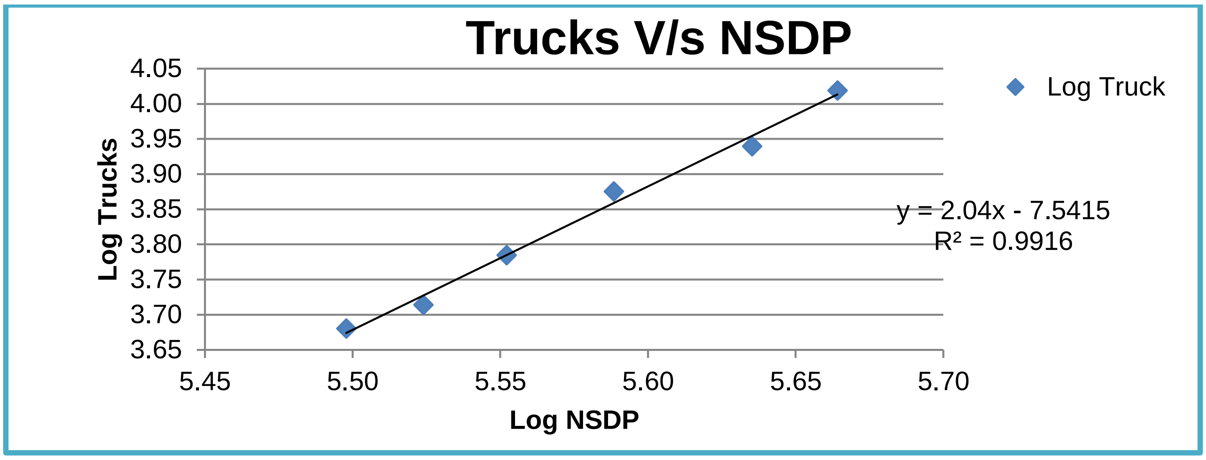

Figure 5-8: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Delhi.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-10 : Summary Regression Analysis Delhi

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Delhi	Car/Jeep	PCI	y = 1.1254x + 0.4266	R² = 0.9567	1.1254	5.95%	6.69%	Good Regression
	Bus	Population	y = -4.6707x - 38.36	R² = 0.0418	-4.6707	1.62%	-7.58%	Poor Regression
	LCV	NSDP	y = 1.4894x - - 3.1225	R² = 0.9315	1.4894	7.98%	11.88%	Good Regression
	Truck	NSDP	y = 2.04x - -7.5415	R² = 0.9916	2.0400	7.98%	16.27%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Haryana State.

Table 5-11 : Per Capita Income Vs Car Haryana

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	106085	989519	5.03	6.00		
2013	111780	1134616	5.05	6.05	5%	
2014	119791	1278272	5.08	6.11	7%	
2015	125032	1420621	5.10	6.15	4%	

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2016	137818	1711692	5.14	6.23	10%	
2017	150241	1851788	5.18	6.27	9%	7.23%

Regression analysis of same is given in figure below.

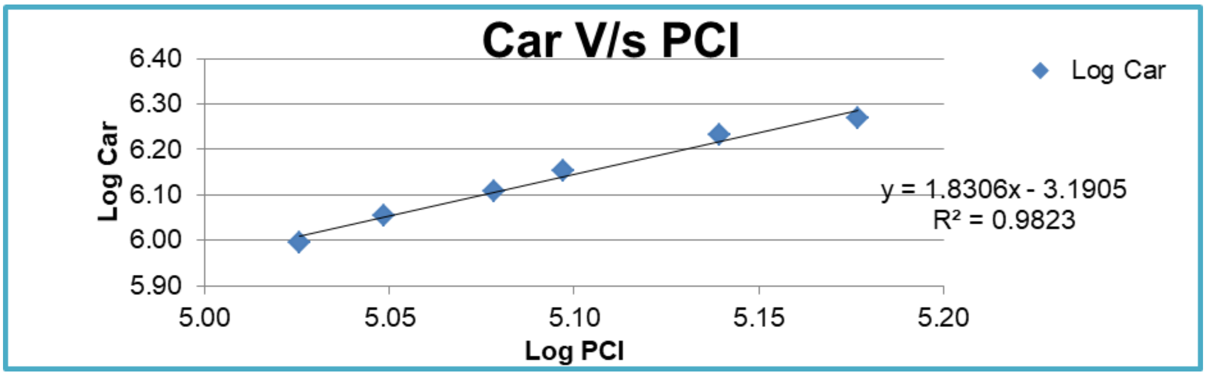

Figure 5-9: Regression and Elasticity PCI vs. Car–Extrapolation Haryana

Table 5-12 : Population Vs Bus Haryana

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	25351462	39153	7.40	4.59		
2013	25751257	43456	7.41	4.64	2%	
2014	26149236	46558	7.42	4.67	2%	
2015	26545282	52640	7.42	4.72	2%	
2016	26939286	55781	7.43	4.75	1%	
2017	27331141	60129	7.44	4.78	1%	1.52%

Regression analysis of same is given in figure below.

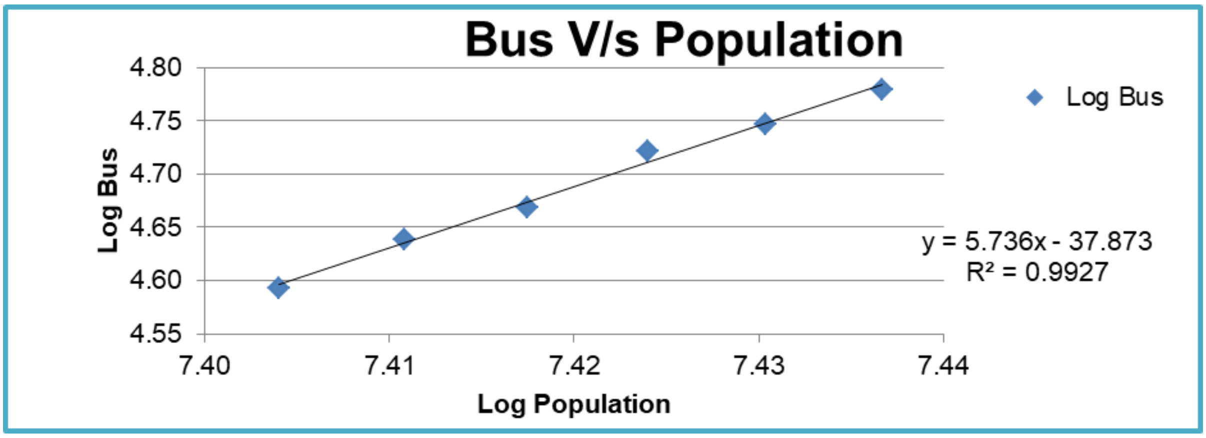

Figure 5-10: Regression and Elasticity Population vs. Bus – Extrapolation Haryana

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-13 : LCV Traffic Vs NSDP Haryana

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	271152	124897	5.43	5.10		
2013	289756	137511	5.46	5.14	7%	
2014	314931	152069	5.50	5.18	9%	
2015	333359	167901	5.52	5.23	6%	
2016	372659	182776	5.57	5.26	12%	

The following figure depicts regression analysis and extrapolation.

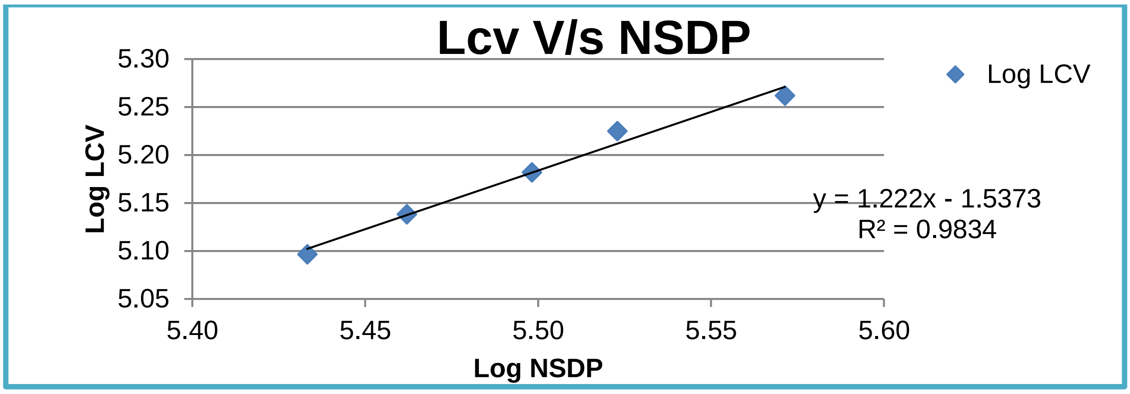

Figure 5-11: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Haryana.

Table 5-14 : Truck Traffic Vs NSDP Haryana

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	271152	292735	5.43	5.47		
2013	289756	307509	5.46	5.49	7%	
2014	314931	327882	5.50	5.52	9%	
2015	333359	348732	5.52	5.54	6%	
2016	372659	367730	5.57	5.57	12%	
2017	412006	390321	5.61	5.59	11%	8.75%

The following figure depicts regression analysis and extrapolation.

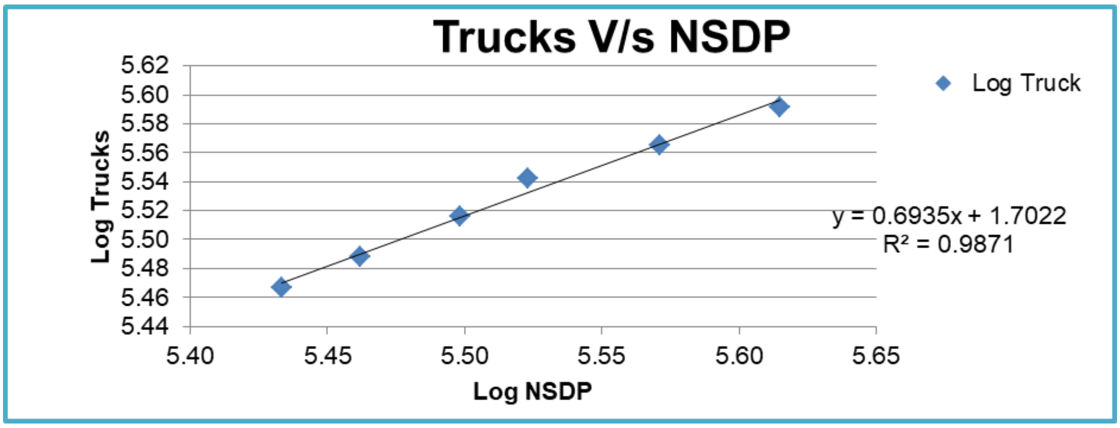

Figure 5-12: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Haryana.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-15 : Summary Regression Analysis Haryana

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Haryana	Car/Jeep	PCI	y = 1.8306x + -3.1905	R^2 = 0.9823	1.8306	7.23%	13.24 %	Good Regression
	Bus	Population	y = 5.736x - - 37.8732	R^2 = 0.9927	5.7360	1.52%	8.69%	Good Regression
	LCV	NSDP	y = 1.222x - - 1.5373	R^2 = 0.9834	1.2220	8.30%	10.14 %	Good Regression
	Truck	NSDP	y = 0.6935x - 1.7022	R^2 = 0.9871	0.6935	8.75%	6.07%	Good Regression

The economic model for predicting growth is a good tool, however other local, regional, and national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trends of growth. Project stretch of Agra to Etawah has recently been commissioned and is under tolling operation since 2016-17. As traffic data is available with the project concessionaire of three years, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. Moreover, the part two years traffic is affected by COVID-19 impact. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

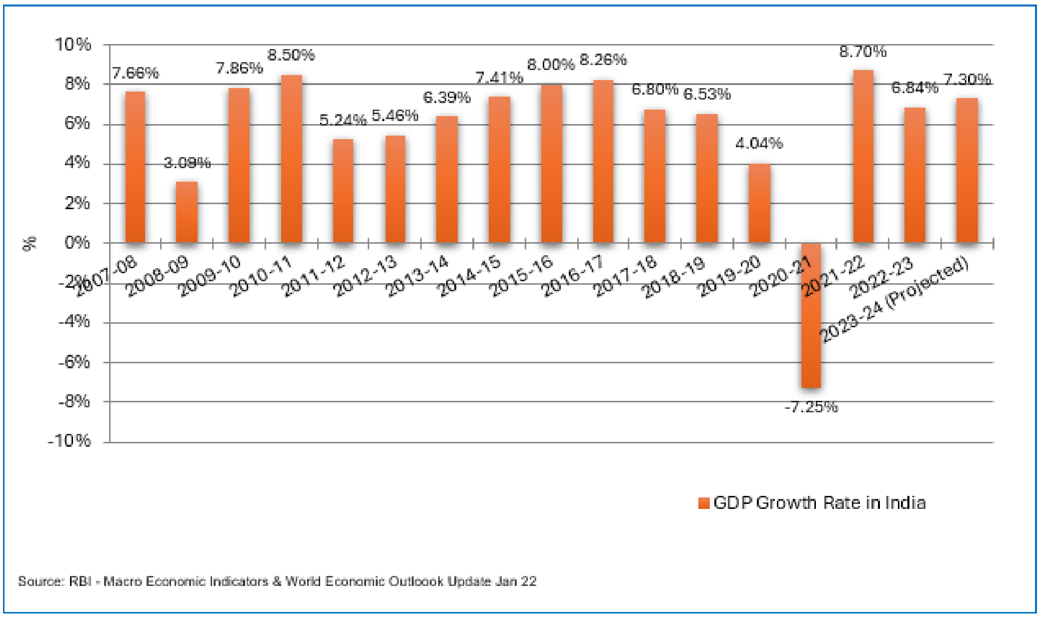

Figure 5-13 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In-India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. The World Economic Outlook update also has predicted a growth rate of about 7.5 % in the year 2022-23.

5.6 Developments along and around the Project Corridor & State

Though the growth of Delhi has been consistently below the national average economic growth, it is the largest state in terms of population and consumption driven demand for goods and services will remain significantly high. The rate of growth of NSDP also seems to be catching up with the national average over the years. Other regions in the influenced area states, namely Delhi, Haryana and Uttarakhand are all growing significantly faster than the national average. Considering the scenario, it may be assumed that the traffic growth on the project highway would remain high and there are minimal risks in terms of growth.

Table 5-16 : GDP of India, UP and other important states

Year	India (GDP)	Bihar	Haryana	Madhya Pradesh	Maharashtra	Odisha	Punjab	Rajasthan	Uttar Pradesh	Uttarakhand	West Bengal	Delhi
1980-81	12336	514	357	623	1464	529	504	560	1631	138	830	269
1981-82	13030	543	371	639	1498	528	551	607	1670	141	808	291
1982-83	13411	548	394	668	1556	497	568	620	1800	152	840	328
1983-84	14464	601	402	702	1654	597	578	761	1871	158	939	320
1984-85	15037	658	418	668	1675	569	623	706	1900	161	964	333
1985-86	15663	672	493	726	1807	635	670	704	1975	167	1005	386
1986-87	16339	725	493	694	1832	643	694	771	2060	174	1045	411
1987-88	16917	685	484	789	1955	623	730	718	2154	182	1101	447
1988-89	18635	772	602	847	2159	754	769	1014	2434	206	1148	486
1989-90	19778	759	610	865	2515	805	834	993	2502	212	1188	531
1990-91	20824	831	674	987	2629	668	849	1149	2651	224	1251	553
1991-92	21122	784	688	916	2620	753	888	1061	2662	225	1349	638
1992-93	22254	737	688	983	3017	740	930	1220	2690	228	1389	660
1993-94	23519	755	719	1088	3349	788	970	1121	2757	233	1490	705
1994-95	25023	842	771	1107	3414	826	995	1325	2901	254	1594	790
1995-96	26846	712	787	1174	3791	864	1032	1374	2995	251	1713	804
1996-97	28987	893	879	1252	3941	804	1107	1535	3327	267	1832	915
1997-98	30234	850	887	1318	4158	920	1137	1721	3292	270	1985	1063
1998-99	32255	904	934	1405	4324	948	1203	1797	3316	274	2112	1116
1999-00	34837	950	1002	1552	4735	1008	1267	1801	3440	274	2264	1170
2000-01	36282	1106	1081	1426	4589	982	1309	1743	3511	308	2343	1215
2001-02	38236	1043	1165	1528	4751	1042	1326	1941	3575	323	2512	1262
2002-03	39719	1175	1236	1449	5079	1034	1348	1708	3690	353	2600	1359
2003-04	42883	1099	1358	1611	5471	1185	1433	2251	3885	381	2753	1433
2004-05	45906	1238	1475	1664	5948	1340	1504	2196	4079	431	2936	1588
2005-06	50257	1207	1608	1748	6810	1399	1577	2344	4317	492	3121	1752
2006-07	55066	1416	1791	1907	7748	1574	1748	2620	4660	551	3366	1969
2007-08	60199	1489	1931	1997	8650	1708	1899	2739	4959	648	3627	2191
2008-09	64248	1716	2080	2250	8786	1837	2004	2969	5336	716	3774	2464
2009-10	69769	1798	2340	2463	9634	1852	2132	3142	5668	839	4067	2667
2010-11	75987	2073	2498	2592	10732	1968	2270	3614	6120	927	4313	2888
2011-12	81069	2285	2712	2824	11222	2042	2392	3953	6451	1020	4471	3147
2012-13	85463	2369	2894	3069	11842	2163	2518	4098	6736	1095	4838	3342
2013-14	90636	2469	3142	3226	12671	2331	2675	4343	7075	1178	5247	3565
2014-15	97121	2557	3314	3394	13322	2359	2777	4656	7297	1257	5633	3882
2015-16	105033	2749	3612	3597	14417	2557	2926	4981	7894	1355	-	4291
2016-17	112476	3033	3927	4129	15744	2828	3095	5352	8457	1448	-	4658
2017-18	119762	-	-	4432	-	3029	-	5736	9011	1547	-	5035
Growth 1981-2018	6.34	5.05	6.88	5.44	6.82	4.83	5.17	6.49	4.73	6.75	5.79	8.24
Growth 1994-2018	7.02	6.23	7.66	6.03	6.96	5.77	5.17	7.04	5.06	8.20	6.54	8.53
Growth 2000-2018	7.10	7.07	8.37	6.00	7.32	6.30	5.40	6.65	5.50	10.10	6.27	8.45

5.7 Industrial Units along Project Corridor

There are a number of big and small industrial units along the project corridor. The following figure shows some of these along corridors.

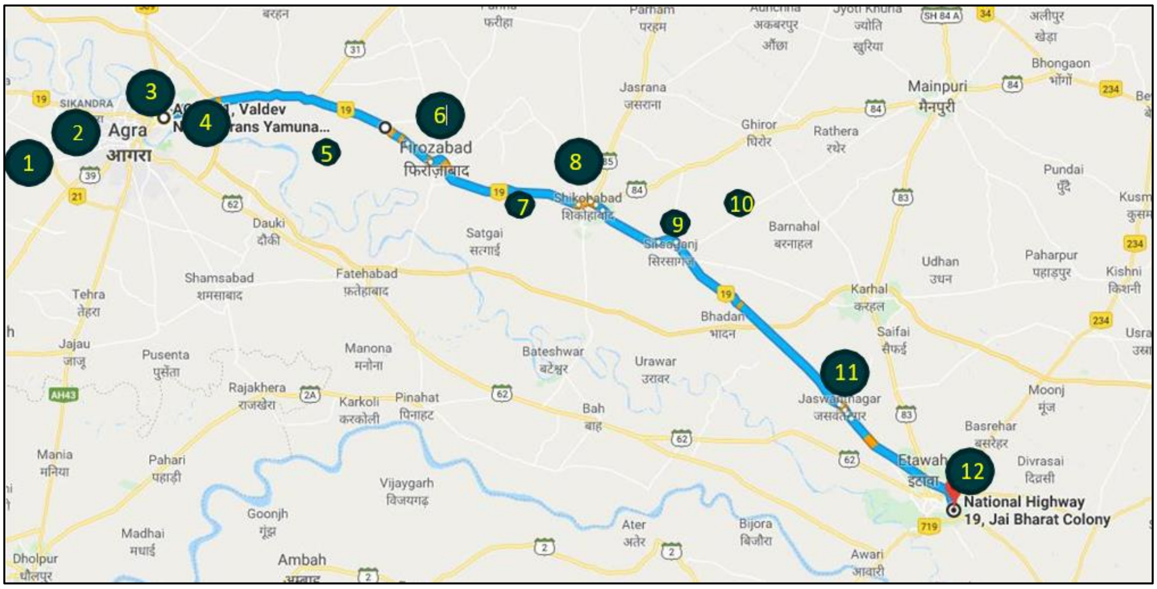

Figure 5-14 : Industrial Units along project corridor.

The following is the list of industrial units along the project corridor.

1. Leather Park, **Agra**
2. Export Promotional Industrial Park (EPIP)
3. Foundry Nagar (BK Casting, Agricultural Industries, Paint Industries, Plastic Industries, Metal Industries), **Agra**
4. Industrial Estate, **Agra**
5. Agarbatti Industry
6. Glass Industries, **Firozabad**
7. Pipe Industries, Glass Bulb Industries
8. Agro Industries, Glass Industries, Cold Storage
9. Food Processing Industries
10. PVC Pipe Industries
11. Rural Industrial Estate, **Jaswant Nagar**
12. **Etawah**(Caplock Industries Private Limited, Rice Mills)

Such industries along project corridor and urban development around major cities of Firozabad, Tundla, Shikohabad, Jaswantnagar and Wtawah provide impetus to project traffic on corridor.

5.8 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as below. The rate of growth is moderate in light of overall regional trends. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, the rate of growth diminishes. Same growth rate is not sustainable for long. Hence growth rates have been suitably stepped down in future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation from Most Likely case for corridor in both states.

5.8.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-17 : Recommended Growth Rates Optimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.96%	8.75%	8.71%	7.42%	6.23%	5.15%
Bus	4.86%	4.70%	4.68%	3.29%	2.58%	1.95%
LCV	5.91%	5.71%	5.65%	4.63%	3.71%	3.16%
2- Axle	6.25%	6.07%	6.01%	5.06%	4.20%	3.42%
3 - Axle	6.59%	6.39%	6.33%	5.32%	4.41%	3.59%
4 to 6 Axle	6.93%	6.72%	6.64%	5.58%	4.62%	3.76%
7 and Above Axle	6.93%	6.72%	6.64%	5.58%	4.62%	3.76%

Table 5-18 : Recommended Growth Rates Pessimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.46%	8.25%	8.21%	6.92%	5.73%	4.65%
Bus	4.36%	4.20%	4.18%	2.79%	2.08%	1.45%
LCV	5.41%	5.21%	5.15%	4.13%	3.21%	2.66%
2- Axle	5.75%	5.57%	5.51%	4.56%	3.70%	2.92%
3 - Axle	6.09%	5.89%	5.83%	4.82%	3.91%	3.09%
4 to 6 Axle	6.43%	6.22%	6.14%	5.08%	4.12%	3.26%
7 and Above Axle	6.43%	6.22%	6.14%	5.08%	4.12%	3.26%

Table 5-19 : Recommended Growth Rates Most Likely

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.71%	8.50%	8.46%	7.17%	5.98%	4.90%
Bus	4.61%	4.45%	4.43%	3.04%	2.33%	1.70%
LCV	5.66%	5.46%	5.40%	4.38%	3.46%	2.91%
2- Axle	6.00%	5.82%	5.76%	4.81%	3.95%	3.17%
3 - Axle	6.34%	6.14%	6.08%	5.07%	4.16%	3.34%
4 to 6 Axle	6.68%	6.47%	6.39%	5.33%	4.37%	3.51%
7 and Above Axle	6.68%	6.47%	6.39%	5.33%	4.37%	3.51%

With completion of project corridor and removal of bottlenecks as discussed in previous chapter, certain part of traffic would return to project road which had started using Agra - Lucknow Expressway as preferred route. This also has been considered while estimating future traffic and revenue on project road.

Traffic and revenue have been worked out on the basis of the above growths and some are presented in subsequent chapters of report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Chainage 224.95 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	9575	1067	1328	1957	879	2764	10	17580	36151
2024-25	10434	1131	1394	2079	937	2955	11	18941	38708
2025-26	11347	1196	1459	2205	997	3153	11	20368	41362
2026-27	12340	1264	1528	2339	1060	3365	11	21907	44209
2027-28	13419	1336	1599	2481	1127	3591	11	23564	47253
2028-29	14593	1412	1674	2631	1199	3832	11	25352	50517
2029-30	15870	1492	1752	2791	1276	4090	11	27282	54020
2030-31	17252	1576	1834	2959	1356	4361	11	29349	57737
2031-32	18755	1665	1920	3137	1441	4651	11	31580	61726
2032-33	20387	1759	2009	3326	1532	4960	11	33984	65996
2033-34	22162	1858	2102	3526	1628	5290	11	36577	70572
2034-35	24092	1962	2200	3738	1730	5642	11	39375	75478
2035-36	25879	2052	2272	3927	1821	5957	11	41919	79873
2036-37	27799	2147	2347	4125	1917	6289	11	44635	84537
2037-38	29863	2246	2424	4334	2019	6641	11	47538	89497
2038-39	32080	2350	2504	4554	2126	7012	11	50637	94761
2039-40	34460	2458	2586	4784	2239	7404	11	53942	100342
2040-41	36608	2549	2652	4985	2337	7746	11	56888	105260
2041-42	38891	2644	2721	5194	2439	8104	11	60004	110437
2042-43	41316	2742	2791	5412	2546	8479	11	63297	115881
2043-44	43892	2843	2863	5639	2658	8871	11	66777	121606
2044-45	46629	2948	2937	5876	2775	9281	11	70457	127629
2045-46	49031	3041	2994	6077	2875	9629	11	73658	132811

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Chainage 285.20 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3525	742	559	1532	826	2685	10	9880	25521
2024-25	3842	786	586	1627	881	2871	11	10604	27272
2025-26	4179	830	613	1726	938	3064	11	11361	29093
2026-27	4544	877	641	1831	998	3270	11	12172	31034
2027-28	4941	926	671	1942	1061	3489	11	13041	33102
2028-29	5373	978	702	2060	1129	3723	11	13976	35316
2029-30	5842	1034	735	2185	1201	3973	11	14981	37684
2030-31	6350	1092	769	2316	1277	4237	11	16052	40190
2031-32	6902	1153	805	2455	1358	4518	11	17202	42866
2032-33	7503	1218	842	2603	1444	4818	11	18439	45728
2033-34	8157	1287	881	2759	1535	5138	11	19768	48783
2034-35	8867	1360	922	2924	1632	5479	11	21195	52046
2035-36	9525	1422	952	3072	1719	5785	11	22486	54969
2036-37	10231	1487	983	3228	1810	6108	11	23858	58060
2037-38	10990	1556	1015	3391	1907	6449	11	25319	61333
2038-39	11805	1628	1048	3562	2008	6809	11	26871	64791
2039-40	12680	1703	1082	3743	2115	7189	11	28523	68455
2040-41	13470	1766	1110	3900	2208	7521	11	29986	71667
2041-42	14309	1831	1138	4064	2305	7869	11	31527	75037
2042-43	15200	1899	1168	4234	2406	8232	11	33150	78566
2043-44	16147	1969	1198	4411	2512	8613	11	34861	82272
2044-45	17153	2042	1229	4596	2623	9011	11	36665	86159
2045-46	18036	2107	1253	4753	2717	9350	11	38227	89490

Table 6-3 : Total Tollable Traffic @ Toll Plaza 1- Chainage 224.95 KM
(Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	9575	1067	1328	1957	879	2764	10	17580	36151
2024-25	10386	1125	1386	2069	933	2941	11	18851	38522
2025-26	11243	1184	1444	2185	988	3124	11	20179	40978
2026-27	12170	1246	1504	2307	1046	3319	11	21603	43595
2027-28	13174	1311	1567	2436	1107	3526	11	23132	46387
2028-29	14261	1379	1632	2572	1171	3745	11	24771	49357
2029-30	15437	1450	1701	2716	1239	3978	11	26532	52531
2030-31	16704	1524	1772	2866	1311	4223	11	28411	55890
2031-32	18076	1602	1846	3024	1386	4482	11	30427	59466
2032-33	19561	1684	1923	3190	1466	4757	11	32592	63280
2033-34	21167	1770	2003	3366	1551	5049	11	34917	67352

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2034-35	22904	1861	2086	3551	1641	5359	11	37413	71695
2035-36	24490	1938	2144	3713	1720	5632	11	39648	75522
2036-37	26185	2018	2204	3882	1803	5918	11	42021	79560
2037-38	27996	2101	2265	4059	1889	6219	11	44540	83822
2038-39	29933	2187	2328	4244	1980	6535	11	47218	88327
2039-40	32005	2277	2393	4437	2075	6867	11	50065	93087
2040-41	33840	2350	2442	4601	2156	7149	11	52549	97182
2041-42	35780	2425	2492	4771	2240	7444	11	55163	101474
2042-43	37832	2502	2544	4948	2327	7751	11	57915	105971
2043-44	40002	2582	2597	5131	2418	8070	11	60811	110678
2044-45	42296	2665	2651	5320	2513	8402	11	63858	115604
2045-46	44262	2736	2689	5476	2591	8676	11	66441	119726

Table 6-4 : Total Tollable Traffic @ Toll Plaza 2- Chainage 285.20KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3525	742	559	1532	826	2685	10	9880	25521
2024-25	3823	782	582	1620	877	2858	11	10553	27144
2025-26	4138	822	606	1710	928	3036	11	11251	28815
2026-27	4479	865	631	1806	982	3225	11	11999	30596
2027-28	4848	909	658	1906	1040	3426	11	12798	32490
2028-29	5247	956	686	2012	1101	3639	11	13652	34503
2029-30	5680	1005	714	2124	1165	3865	11	14564	36639
2030-31	6145	1057	744	2241	1233	4102	11	15533	38893
2031-32	6648	1111	775	2365	1305	4354	11	16569	41292
2032-33	7193	1168	807	2495	1381	4621	11	17676	43838
2033-34	7782	1228	841	2632	1461	4905	11	18860	46548
2034-35	8421	1291	876	2777	1545	5206	11	20127	49428
2035-36	9003	1344	900	2903	1619	5471	11	21251	51954
2036-37	9627	1400	925	3035	1697	5749	11	22444	54618
2037-38	10294	1457	950	3173	1779	6041	11	23705	57420
2038-39	11006	1517	977	3318	1864	6348	11	25041	60374
2039-40	11768	1579	1004	3469	1954	6670	11	26455	63482
2040-41	12443	1630	1025	3598	2031	6945	11	27683	66152
2041-42	13157	1682	1046	3731	2110	7231	11	28968	68930
2042-43	13911	1735	1068	3869	2192	7529	11	30315	71831
2043-44	14709	1791	1090	4012	2277	7840	11	31730	74862
2044-45	15553	1848	1112	4161	2366	8164	11	33215	78030
2045-46	16277	1897	1128	4283	2439	8430	11	34465	80657

Traffic projections for Most Likely scenario is given as under

Table 6-5 : Total Tollable Traffic @ Toll Plaza 1-Tundla- Chainage 224.95 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	9575	1067	1328	1957	879	2764	10	17580	36151
2024-25	10411	1128	1390	2073	935	2948	11	18896	38613
2025-26	11296	1190	1451	2194	992	3139	11	20273	41167
2026-27	12257	1255	1515	2322	1053	3342	11	21755	43898
2027-28	13299	1323	1582	2458	1117	3559	11	23349	46820
2028-29	14430	1395	1652	2602	1185	3789	11	25064	49940
2029-30	15657	1471	1725	2754	1257	4034	11	26909	53274
2030-31	16982	1550	1801	2913	1332	4292	11	28881	56809
2031-32	18418	1633	1881	3081	1412	4566	11	31002	60586
2032-33	19975	1721	1964	3258	1497	4858	11	33284	64624
2033-34	21664	1813	2051	3446	1587	5168	11	35740	68941
2034-35	23496	1911	2142	3645	1683	5498	11	38386	73563
2035-36	25180	1994	2207	3821	1768	5791	11	40772	77668
2036-37	26985	2081	2273	4005	1857	6100	11	43312	82011
2037-38	28920	2172	2342	4197	1951	6425	11	46018	86610
2038-39	30993	2267	2413	4398	2049	6768	11	48899	91479
2039-40	33216	2366	2486	4610	2152	7129	11	51970	96639
2040-41	35205	2448	2544	4792	2241	7441	11	54682	101142
2041-42	37312	2533	2603	4981	2333	7766	11	57539	105859
2042-43	39545	2621	2663	5177	2430	8106	11	60553	110813
2043-44	41911	2712	2725	5381	2531	8460	11	63731	116010
2044-45	44420	2806	2789	5593	2636	8830	11	67085	121468
2045-46	46597	2888	2837	5770	2724	9139	11	69966	126097

Table 6-6 : Total Tollable Traffic @ Toll Plaza 2- Gurau - Chainage 285.20 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3525	742	559	1532	826	2685	10	9880	25521
2024-25	3833	784	584	1623	879	2865	11	10579	27209
2025-26	4159	827	609	1717	932	3050	11	11305	28948
2026-27	4512	872	636	1817	989	3247	11	12084	30807
2027-28	4895	919	664	1923	1050	3457	11	12919	32791
2028-29	5310	968	694	2035	1114	3681	11	13813	34905
2029-30	5761	1020	725	2153	1182	3919	11	14771	37156
2030-31	6248	1075	757	2277	1254	4170	11	15792	39539
2031-32	6775	1132	791	2408	1330	4436	11	16883	42072
2032-33	7348	1193	826	2546	1411	4720	11	18055	44776
2033-34	7970	1257	863	2692	1497	5021	11	19311	47656
2034-35	8644	1325	901	2847	1588	5342	11	20658	50728
2035-36	9264	1382	928	2984	1668	5627	11	21864	53448
2036-37	9928	1442	956	3128	1752	5927	11	23144	56320

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2037-38	10640	1504	985	3278	1841	6244	11	24503	59356
2038-39	11402	1570	1015	3436	1934	6577	11	25945	62558
2039-40	12219	1639	1046	3601	2032	6928	11	27476	65940
2040-41	12951	1696	1070	3743	2116	7231	11	28818	68871
2041-42	13725	1754	1095	3891	2204	7548	11	30228	71942
2042-43	14546	1815	1120	4044	2295	7878	11	31709	75146
2043-44	15416	1877	1146	4203	2390	8223	11	33266	78502
2044-45	16339	1942	1173	4369	2489	8583	11	34906	82018
2045-46	17139	1998	1192	4507	2572	8884	11	36303	84977

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Agra-Etawah project, the Target Date and Target Traffic are defined as under:

Target Date - 1st April 2025

Target Traffic - 52995 PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. The probable extension of the concession period is estimated according to article 29 of the concession agreement which comes to about 5 years. Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2025	52995	35107	-34%	51%	20%	24	4.8

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2025	52995	35280	-33%	50%	20%	24	4.8

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2025	52995	34941	-34%	51%	20%	24	4.8

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Surat-Dahisar section of NH-8 is based on the old toll policy. As per the Toll Notification (Schedule -G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued at fee 50 time the single journey fee at 2/3rd Rate.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: Local Car Jeep Van -Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza). Additionally, local commercial vehicles are charged at 50% rate of single journey.

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A} - \text{WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2021-22. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. Following graph provides projection of rate of inflation (WPI) in India. Data has been taken from Office of Economic Advisor web site (www.eaindustry.nic.in). WPI for years 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

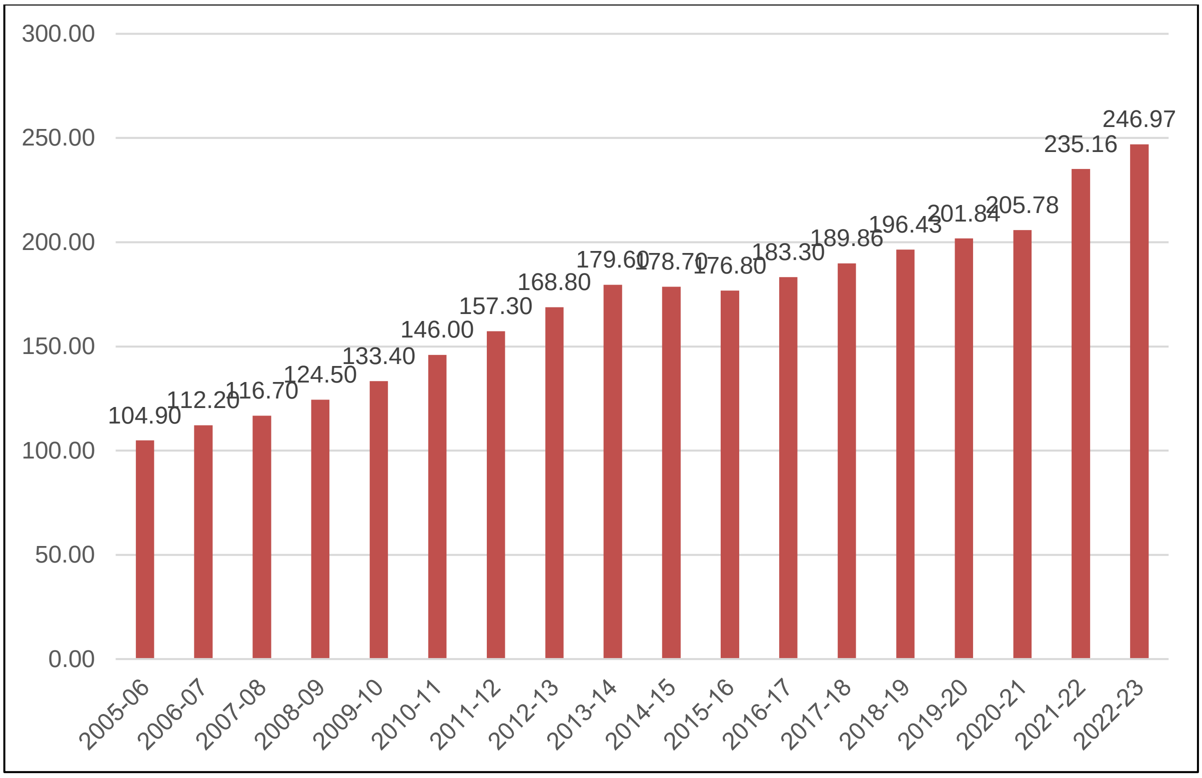

Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey@ Km 224.95

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2023-24	105	170	355	355	385	555	675
2024-25	105	175	365	365	395	570	695
2025-26	115	180	380	380	415	600	730
2026-27	120	190	400	400	435	630	765
2027-28	125	200	420	420	460	660	805
2028-29	130	210	440	440	485	695	845
2029-30	135	220	465	465	505	730	890
2030-31	145	235	490	490	535	765	935
2031-32	150	245	515	515	560	805	980
2032-33	160	260	540	540	590	850	1035
2033-34	170	270	570	570	620	890	1085
2034-35	175	285	600	600	655	940	1145
2035-36	185	300	630	630	690	990	1205
2036-37	195	315	665	665	725	1040	1265
2037-38	205	335	700	700	760	1095	1335
2038-39	215	350	735	735	805	1155	1405
2039-40	230	370	775	775	845	1215	1480
2040-41	240	390	815	815	890	1280	1560
2041-42	255	410	860	860	940	1350	1645
2042-43	270	435	905	905	990	1425	1730
2043-44	285	455	955	955	1045	1500	1825
2044-45	300	480	1010	1010	1100	1580	1925
2045-46	315	510	1065	1065	1160	1670	2030

Table 7-3 : Toll Rates for Single Journey @ Km 285.20

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2023-24	110	180	380	380	415	600	730
2024-25	115	185	390	390	425	615	750
2025-26	120	195	410	410	450	645	785
2026-27	125	205	430	430	470	680	825
2027-28	130	215	455	455	495	710	865
2028-29	140	230	475	475	520	750	910
2029-30	145	240	500	500	545	785	960
2030-31	155	250	525	525	575	825	1005
2031-32	160	265	555	555	605	870	1060
2032-33	170	280	585	585	635	915	1115
2033-34	180	295	615	615	670	965	1170
2034-35	190	310	645	645	705	1015	1235
2035-36	200	325	680	680	740	1065	1300

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2036-37	210	340	715	715	780	1125	1365
2037-38	220	360	755	755	820	1180	1440
2038-39	230	380	795	795	865	1245	1515
2039-40	245	400	835	835	910	1310	1595
2040-41	255	420	880	880	960	1380	1680
2041-42	270	445	930	930	1015	1455	1775
2042-43	285	465	980	980	1070	1535	1870
2043-44	300	495	1030	1030	1125	1620	1970
2044-45	315	520	1090	1090	1185	1705	2080
2045-46	335	550	1150	1150	1250	1800	2190

Table 7-4 : Toll Rates for Return Journey @ Km 224.95

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2023-24	155	255	530	530	580	835	1015
2024-25	160	260	545	545	595	855	1040
2025-26	170	275	570	570	625	895	1090
2026-27	180	285	600	600	655	940	1145
2027-28	185	300	630	630	690	990	1205
2028-29	195	315	665	665	725	1040	1265
2029-30	205	335	700	700	760	1095	1330
2030-31	215	350	735	735	800	1150	1400
2031-32	230	370	770	770	840	1210	1470
2032-33	240	385	810	810	885	1270	1550
2033-34	250	405	855	855	930	1340	1630
2034-35	265	430	900	900	980	1410	1715
2035-36	280	450	945	945	1030	1485	1805
2036-37	295	475	995	995	1085	1560	1900
2037-38	310	500	1050	1050	1145	1645	2000
2038-39	325	525	1105	1105	1205	1730	2105
2039-40	345	555	1165	1165	1270	1825	2220
2040-41	360	585	1225	1225	1335	1920	2340
2041-42	380	615	1290	1290	1410	2025	2465
2042-43	400	650	1360	1360	1485	2135	2600
2043-44	425	685	1435	1435	1565	2250	2740
2044-45	445	720	1515	1515	1650	2375	2890
2045-46	470	760	1595	1595	1740	2505	3045

Table 7-5 : Toll Rates for Return Journey @ Km 285.20

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2023-24	165	275	575	575	625	900	1095
2024-25	170	280	585	585	640	920	1120
2025-26	180	295	615	615	675	970	1180
2026-27	190	310	650	650	705	1015	1235
2027-28	195	325	680	680	745	1070	1300
2028-29	210	340	715	715	780	1120	1365
2029-30	220	360	750	750	820	1180	1435
2030-31	230	380	790	790	865	1240	1510
2031-32	240	395	830	830	910	1305	1590
2032-33	255	420	875	875	955	1370	1670
2033-34	265	440	920	920	1005	1445	1760
2034-35	280	460	970	970	1055	1520	1850
2035-36	295	485	1020	1020	1115	1600	1945
2036-37	310	510	1075	1075	1170	1685	2050
2037-38	330	540	1130	1130	1235	1775	2160
2038-39	345	570	1190	1190	1300	1865	2275
2039-40	365	600	1255	1255	1370	1965	2395
2040-41	385	630	1320	1320	1440	2075	2525
2041-42	405	665	1395	1395	1520	2185	2660
2042-43	425	700	1470	1470	1600	2305	2805
2043-44	450	740	1550	1550	1690	2430	2955
2044-45	475	780	1630	1630	1780	2560	3115
2045-46	500	820	1720	1720	1880	2700	3285

Table 7-6 : Toll Rates for Monthly pass Local @ 224.95

Year	Car	Minibus /LCV
2023-24	330	330
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845

Year	Car	Minibus /LCV
2043-44	890	890
2044-45	940	940
2045-46	990	990

Table 7-7 : Toll Rates for Monthly pass Local @ 285.20

Year	Car	Minibus /LCV
2023-24	330	330
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845
2043-44	890	890
2044-45	940	940
2045-46	990	990

Table 7-8 : Toll Rates for Monthly Pass @ Km 224.95

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2023-24	3490	5635	11810	11810	12880	18520	22545
2024-25	3575	5775	12100	12100	13200	18975	23100
2025-26	3755	6065	12710	12710	13865	19930	24265
2026-27	3945	6375	13350	13350	14565	20940	25490
2027-28	4145	6695	14030	14030	15305	22000	26785
2028-29	4355	7040	14745	14745	16085	23125	28150
2029-30	4580	7400	15500	15500	16910	24305	29590
2030-31	4815	7780	16295	16295	17780	25555	31115
2031-32	5065	8180	17140	17140	18695	26875	32720
2032-33	5325	8605	18030	18030	19665	28270	34420
2033-34	5605	9055	18970	18970	20690	29745	36210
2034-35	5895	9525	19960	19960	21775	31300	38105
2035-36	6205	10025	21010	21010	22920	32945	40110
2036-37	6535	10555	22120	22120	24130	34685	42225

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2037-38	6880	11115	23290	23290	25410	36525	44465
2038-39	7250	11710	24530	24530	26760	38470	46830
2039-40	7635	12335	25840	25840	28190	40525	49335
2040-41	8045	12995	27230	27230	29705	42700	51985
2041-42	8480	13695	28695	28695	31305	45000	54785
2042-43	8935	14435	30250	30250	33000	47435	57745
2043-44	9420	15220	31890	31890	34790	50010	60885
2044-45	9935	16050	33630	33630	36685	52735	64200
2045-46	10480	16930	35470	35470	38690	55620	67710

Table 7-9 : Toll Rates for Monthly Pass @ Km 285.20

Year	Car	Minibus /LCV	Bus	Truck	3 axles	Multi axle	Oversized Vehicles
2023-24	3685	6080	12740	12740	13895	19975	24320
2024-25	3780	6230	13055	13055	14240	20470	24920
2025-26	3970	6545	13710	13710	14955	21500	26175
2026-27	4175	6875	14405	14405	15715	22590	27500
2027-28	4390	7225	15135	15135	16510	23735	28895
2028-29	4615	7590	15905	15905	17355	24945	30365
2029-30	4850	7980	16720	16720	18240	26220	31920
2030-31	5100	8390	17580	17580	19180	27570	33565
2031-32	5365	8825	18490	18490	20170	28995	35295
2032-33	5645	9280	19450	19450	21215	30500	37130
2033-34	5945	9765	20460	20460	22320	32085	39060
2034-35	6255	10275	21530	21530	23490	33765	41105
2035-36	6585	10815	22665	22665	24725	35540	43265
2036-37	6935	11390	23860	23860	26030	37415	45550
2037-38	7305	11990	25125	25125	27410	39400	47965
2038-39	7695	12630	26460	26460	28870	41500	50520
2039-40	8110	13305	27875	27875	30410	43715	53220
2040-41	8550	14020	29375	29375	32045	46065	56075
2041-42	9010	14775	30955	30955	33770	48545	59100
2042-43	9500	15575	32630	32630	35595	51170	62295
2043-44	10020	16420	34400	34400	37530	53950	65675
2044-45	10565	17315	36275	36275	39575	56890	69255
2045-46	11145	18260	38260	38260	41740	60000	73045

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2045-46 years starting from the year 2023-24 are shown in tables below.

Table 7-10 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	113.24	139.03	**252.28**
2024-25	123.79	152.08	**275.87**
2025-26	138.76	171.17	**309.92**
2026-27	155.52	192.19	**347.71**
2027-28	174.13	215.35	**389.48**
2028-29	195.46	241.16	**436.62**
2029-30	218.42	270.56	**488.97**
2030-31	244.95	304.26	**549.21**
2031-32	275.57	342.71	**618.28**
2032-33	308.66	384.53	**693.19**
2033-34	346.70	431.52	**778.21**
2034-35	388.89	485.39	**874.28**
2035-36	432.66	542.06	**974.72**
2036-37	480.08	601.63	**1081.71**
2037-38	533.18	669.78	**1202.96**
2038-39	592.79	745.32	**1338.12**
2039-40	661.32	835.20	**1496.52**
2040-41	726.38	916.84	**1643.22**
2041-42	802.40	1014.59	**1816.99**
2042-43	885.13	1122.05	**2007.17**
2043-44	979.52	1244.91	**2224.43**
2044-45	1077.13	1370.93	**2448.06**
2045-46	1180.88	1503.96	**2684.83**

Table 7-11 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	113.24	139.03	**252.28**
2024-25	123.21	151.35	**274.56**
2025-26	137.44	169.54	**306.98**
2026-27	153.34	189.45	**342.79**
2027-28	170.94	211.29	**382.23**
2028-29	190.99	235.48	**426.47**
2029-30	212.43	262.96	**475.39**
2030-31	237.14	294.39	**531.52**
2031-32	265.51	330.05	**595.56**
2032-33	296.03	368.50	**664.53**
2033-34	330.90	411.65	**742.56**
2034-35	369.42	460.92	**830.34**
2035-36	409.12	512.33	**921.45**
2036-37	451.76	565.89	**1017.65**
2037-38	499.40	627.05	**1126.44**
2038-39	552.65	694.49	**1247.13**
2039-40	613.59	774.47	**1388.06**

Year	TP-1	TP2	Total
2040-41	670.86	846.02	**1516.88**
2041-42	737.41	931.75	**1669.17**
2042-43	809.52	1025.54	**1835.06**
2043-44	891.54	1132.50	**2024.05**
2044-45	975.70	1241.09	**2216.79**
2045-46	1064.54	1355.05	**2419.59**

Table 7-12 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	113.24	139.03	**252.28**
2024-25	123.50	151.71	**275.21**
2025-26	138.10	170.34	**308.44**
2026-27	154.44	190.78	**345.22**
2027-28	172.57	213.28	**385.85**
2028-29	193.31	238.31	**431.62**
2029-30	215.47	266.69	**482.16**
2030-31	241.15	299.24	**540.39**
2031-32	270.61	336.20	**606.81**
2032-33	302.43	376.30	**678.73**
2033-34	338.80	421.29	**760.09**
2034-35	379.16	472.80	**851.97**
2035-36	420.85	526.79	**947.64**
2036-37	465.79	583.32	**1049.11**
2037-38	516.08	647.85	**1163.92**
2038-39	572.50	719.22	**1291.72**
2039-40	637.16	804.02	**1441.18**
2040-41	698.19	880.52	**1578.71**
2041-42	769.27	972.10	**1741.37**
2042-43	846.50	1072.50	**1919.00**
2043-44	934.52	1187.22	**2121.74**
2044-45	1025.31	1304.25	**2329.55**
2045-46	1121.33	1427.42	**2548.75**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Agra to Etawah section of NH-2 in state of Delhi from km 199.660 to km 323.525 is currently six lane road. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the most busy and prominent national highway NH-2 which connects political and cultural capitals of India. This is one of the most important trunk roads which spreads across many states. There are large number of townships, industrial corridors and other business establishments coming up along the project corridor. As discussed, the dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give a positive impact to traffic flow on the project. The following can be considered as major outcomes of the study.

a) There is a good amount of tollable traffic running on the project.

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy.

c) The Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on the above it can be considered a stable healthy project from the traffic and revenue point of view.

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GULABPURA TO CHITTORGARH SECTION OF NH 79

(KM 90.000 TO KM 214.870)

IN THE STATE OF RAJASTHAN

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

MARCH 2024

GMD CONSULTANTS ★ NAVI MUMBAI ★

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GMD CONSULTANTS NAVI MUMBAI

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, Six Laning of Gulabpura to Chittorgarh section of NH-79 from km 90.000 to km 214.870is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. M/s CG Tollway Ltd. (Concessionaire) has been awarded the Project for a concession period of 20 years starting from 4th November 2017. The Project has been commissioned and is currently in the operation / maintenance phase for four laning. Six laning of project has also been completed in August 2021.

Length ofprojectroadis124.870Kms. The project road is section of NH-79, which connects Ajmer to Ghat Bilod. Project section of NH-79 passes through district of Bhiwara and Chittorgarh. Project road connects to Udaipur via NH-76.

Project road alignment passes through the towns/ built-up areas Fakirabad, Bhilwara, Gulabpura, & Chittorgarh. Following figure shows alignment of project road section from Gulabpura to Chittorgarh

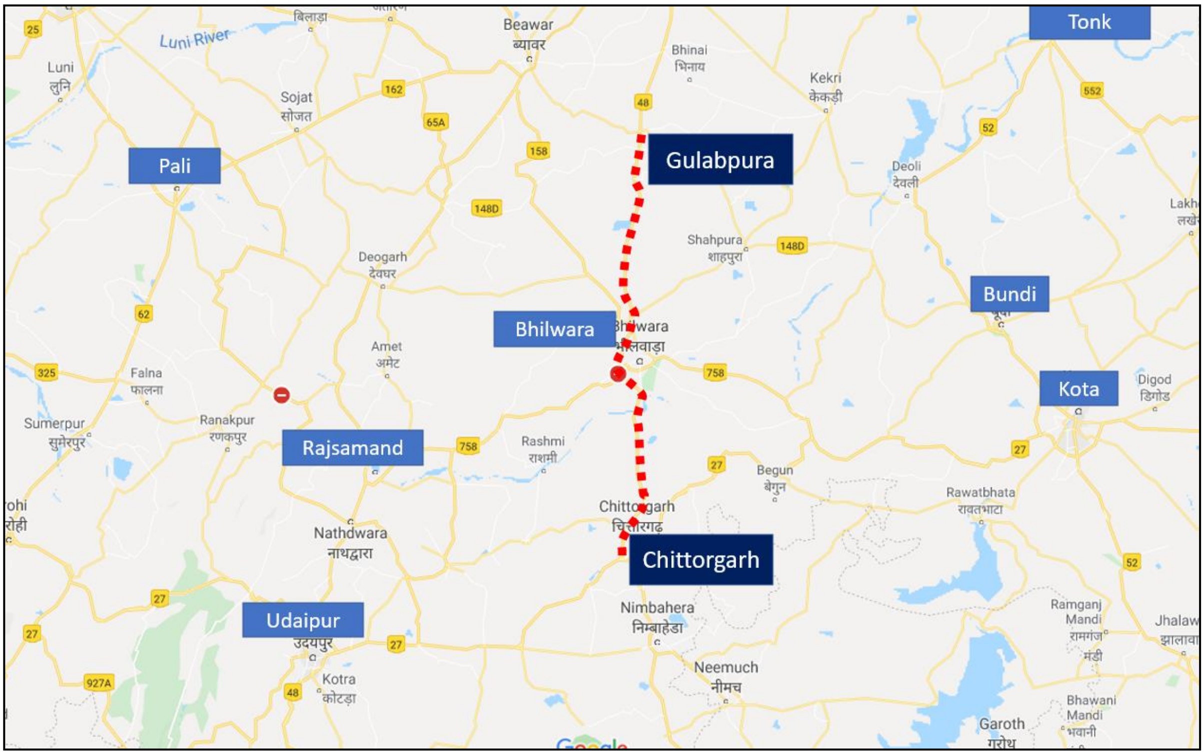

Figure 1-1: Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged GMD Consultants to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as "Traffic Study &Toll Revenue Projection Report" mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 79 (NH 79) is an important link for traffic connecting Delhi, Jaipur to Udaipur, Chittorgarh and down south.

It is one of the major north-south road connectivity for the traffic from northern states of Haryana, Punjab and Delhi to Industrial and tourist areas of Rajasthan like Jaipur, Chittorgarh, Udaipur and then to Dahod, Ratlam and other parts of Madhya Pradesh.

2.2 Project Stretch Description

Section of NH-79 from Gulabpura to Chittorgarh is part of major transportation link in the area connecting industrial / tourist cities of Jaipur, Bhilwara, Chitttorgar and Udaipur. Important cities of Firozabad, Shikohabad, and Jaswant Nagar fall on project alignment. Major mining industries of marble, Zink, felspar, quarts of Udaipur and textile industry of Bhiwara provide are major contributor of commercial traffic on project corridor. Additionally, Udaipur, Chittorgarh and Bhilwara major tourist centers of India. This adds substantial value for passenger traffic on the project corridor section.

Like other parts of India rapid ribbon development is happening around these cities on project highway. This also contributes to sustainable traffic growth.

There are two operative toll plazas at project stretch. First is at Lambia Kalan at Km 121.020 and second at Jojro ka Khera at Km 184.020. The following figure show project alignment and toll plaza locations.

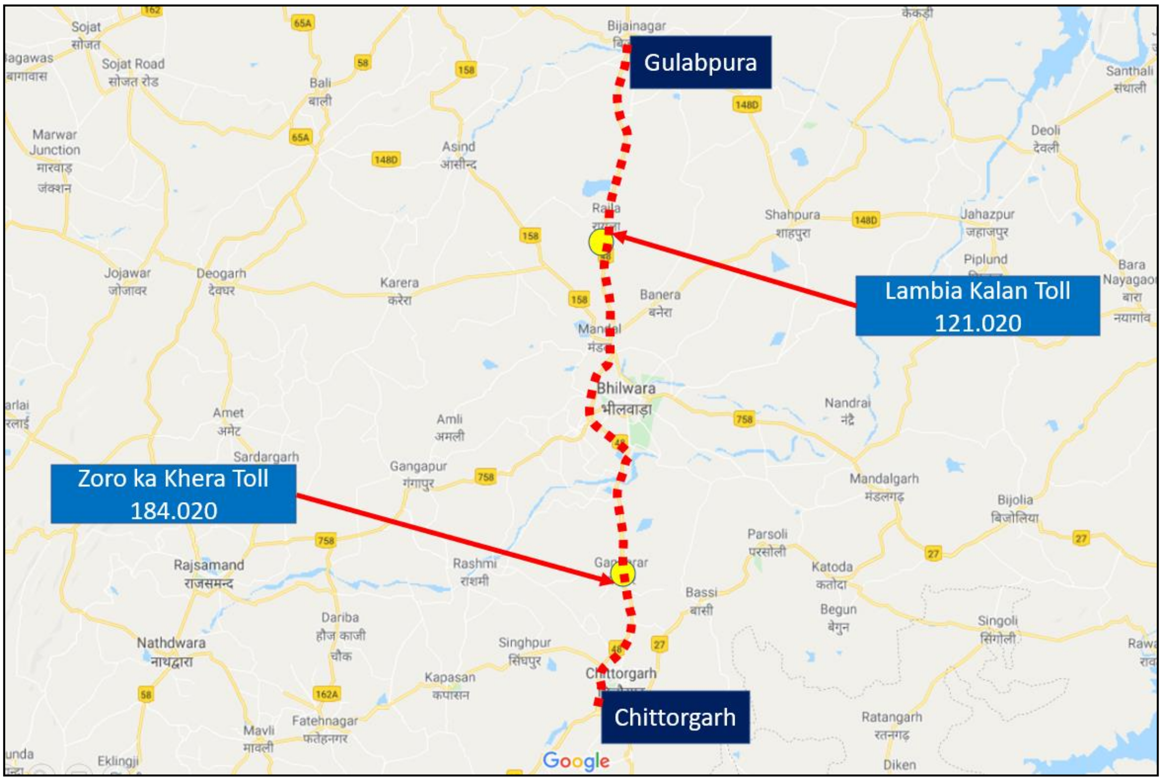

Figure 2-1: Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is in progress and soon will be completed. The following photographs illustrate the project section along the corridor.

Figure 2-2: Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Gulabpura- Chittorgarh section of NH-79 for years 2018-19, 2019-20, 2020-21, 2021-22, 2022-23 and traffic data from April 2023 to November 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	**Km 121.020 Toll Plaza at Lambia Kalan**	AADT for Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023 & Eight month from April	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023 & Eight month from April	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		November 2023	to November 2023	2023 to November 2023	2023 to November 2023	to November 2023
2	**Km 184.020 Toll Plaza at Jojro ka Khera**	AADT for Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2018-19, 2019-20, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus

Vehicle Type	
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Bus
- Truck
- 3-Axle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23 and from April 2023 to November 2023.

Since the traffic data available for this update is for only eight months, from April 2023 to November 20223, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current eight months to arrive at Annual Average Daily Traffic of base year 2023-24. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and Annual Average Daily Traffic (AADT) for year 2023-24.

Table 3-3 : Traffic Data at Lambial Kalan Toll Plaza at Km 121.020

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	3563	3366	4812	6301	6851
2	Minibus /LCV	1266	933	585	768	754
3	Bus	428	270	376	446	455
4	Truck	1587	1321	1788	2455	2520
5	3-Axle Commercial vehicle	2139	1591	1771	2006	1869
6	Multi axle	4606	4011	4587	5086	5130
7	Oversized Vehicle	23	19	30	11	12
Total		**13612**	**11511**	**13949**	**17072**	**17590**

Table 3-4 : Traffic Data at Jojro ka Khera Toll Plaza at Km 184.0200

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	3042	3077	4440	5603	6077
2	Minibus /LCV	1081	824	549	716	777
3	Bus	423	265	347	408	435
4	Truck	1285	1164	1634	2306	2613
5	3-Axle Commercial vehicle	1568	1344	1666	1950	2042

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
6	Multi axle	4360	4201	4934	5536	5971
7	Oversized Vehicle	21	21	21	14	12
Total		**11781**	**10896**	**13592**	**16532**	**17926**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in Table 3-5.

Table 3-5 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5

Vehicle Type	PCUs
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under.

Table 3-6 : Traffic in PCU at Project Stretch Base Year 2023-24

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-2020	Lambia Kalan Km 121.020	13612	38754	2.85
	Jojro ka Khera Km 184.020	11781	34208	2.90
2020-2021	Lambia Kalan Km 121.020	11511	32446	2.82
	Jojro ka Khera Km 184.020	10896	31630	2.90
2021-2022	Lambia Kalan Km 121.020	13949	38721	2.74
	Jojro ka Khera Km 184.020	13592	38503	2.83
2022-23	Lambia Kalan Km 121.020	17072	45107	2.64
	Jojro ka Khera Km 184.020	16532	45642	2.76
2023-24	Lambia Kalan Km 121.020	17590	45650	2.60
	Jojro ka Khera Km 184.020	17926	49431	2.76

It can be observed from above that project traffic has PCU index close to 3 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at four toll plaza locations.

It can be observed that PCU index is consistent at both toll plaza locations.

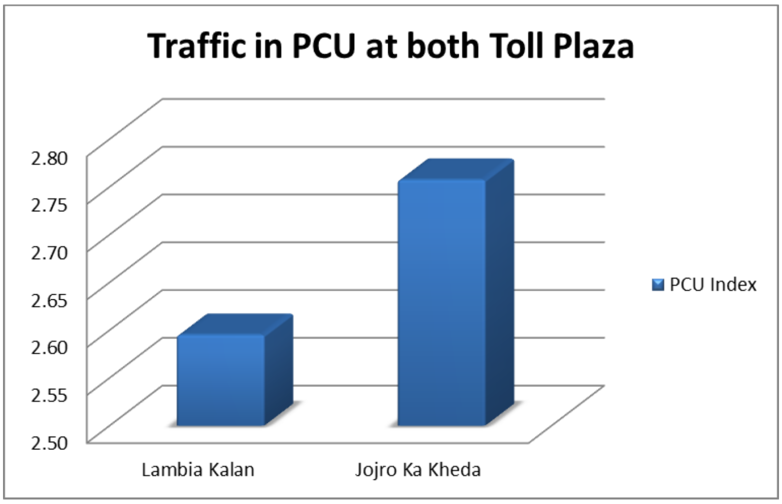

Figure 3-1: Comparison of PCU Index

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

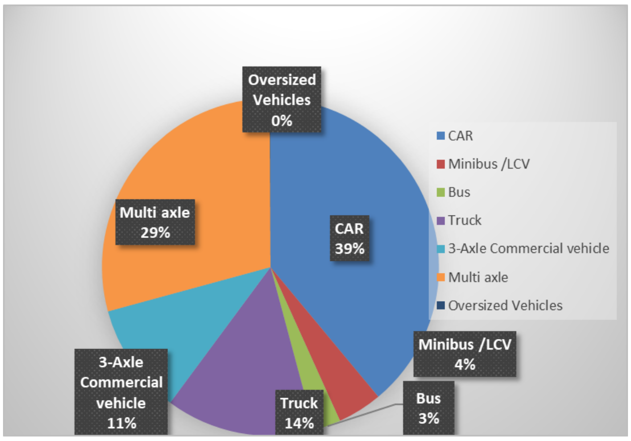

Figure 3-2 :Model Split of Tollable Vehicle-Km 121.020

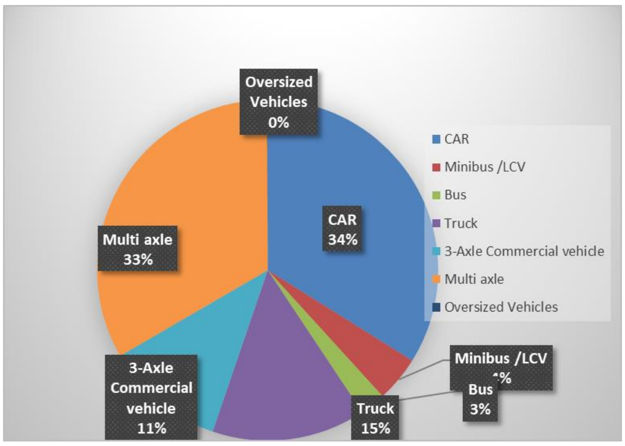

Figure 3-3 :Model Split of Tollable Vehicle- Km 184.020

It is observed that car traffic forms about 39% & 34% of total traffic at toll plaza locations while multi axle commercial vehicles are about 40% & 44% of total traffic. Truck / Bus and LCV share about 21% and 22% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category for year 2023-24

Table 3-7 : Journey Type Bifurcation of Traffic at Lambia Kalan TP KM 121.020

Sr. No	Type	Traffic Volume (Nos.)
		2023-24
1	Single Journey	12623
2	Return Journey	4635
3	Local Commercial Single Journey	292
4	Monthly Pass Local	37
5	Monthly Pass	12

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 72%. Return journey component is 26%. The number of monthly pass Local is 0% and Local commercial Single Journey 2% at Lambia Kalan toll plaza.

The following tables give the details of journey distribution at Jojro ka Khera toll plaza at Km 184.020.

Table 3-8 : Journey Type Bifurcation of Traffic at Jojro ka KheraTPKm 184.020

Sr. No	Type	Traffic Volume (Nos.)
		2023-24
1	Single Journey	12716

Sr. No	Type	Traffic Volume (Nos.) 2023-24
2	Return Journey	4899
3	Local Commercial Single Journey	274
4	Monthly Pass Local	28
5	Monthly Pass	12

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch has toll application history from last few years, and it can be assumed that project traffic is settled. However, from an analysis point of view there can be two alternate routes at local level. One uses Ajmer Road to go from Kishangarh to Chittorgarh and the other on east side via Shapur.

At regional level, there can be two alternates for Udaipur traffic after Kishangarh. One via project road (Kishangarh – Bhiwara- Chittorgarh- Udaipur)

The following maps show these routes in relation to project stretches at both local and regional level.

Figure 4-1: Alternate route at regional level.

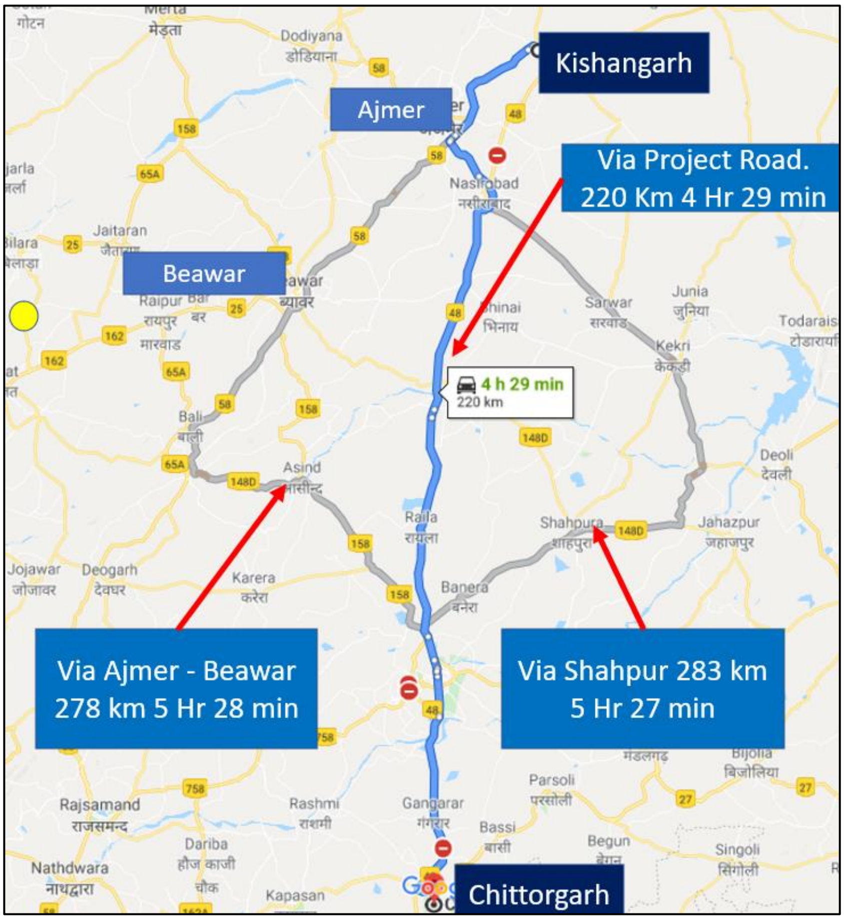

Figure 4-2: Alternate route at local level.

It can be observed that the project highway forms one of the main spines of the corridor between Kishangarh / Jaipurand Chittorgarh. Traffic on project road is now settled and it can be assumed as dedicated traffic on project road for logistic obligations.

At regional level for Udaipur traffic alternate route is faster and traffic is already using this alternate.

With six laning now nearing completion, the project stretch would become slightly more attractive due to the improved level of service. In such a case further diversion of traffic from the project road is not envisaged.

The following table provides summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Kishangarh – Ajmer-Udaipur	Alternate Route	299	58	5 Hr 8 Min	Alternate route has clear advantage for this pair of destination. Traffic Settled. No further diversion expected
	Kishangarh- Chittorgarh-Udaipur	Project Road	330	51	6 Hr 127 Min	
Local Level						
2	Kishangarh – Ajmer-Chittorgarh (West)	Alternate Route	278	50	5 Hr. 28 Min	Project Road has advantage. Alternate route running for years after toll on project road. Traffic Settled. No further diversion expected
	Kishangarh – Shahpur-Chittorgarh (East)	Alternate Route	283	51	5 Hr. 28 Min	
	Kishangarh – Bhilwara-Chittorgarh	Project Road	220	50	4 Hr. 29 Min	

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. Further, it may be noted that since the project highway has already been commissioned and has a tolling history, the current traffic traversing the project corridor already factors in traffic diversion (if any) that may have taken place.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Gulabpur- Chittorgarh section of NH-79has been done taking the above factors into consideration. **"IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways"** is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways.**

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = k x Log (EI) + A
Where,
P = Number of Vehicles (Mode wise)
EI = Economic Indicator
A = Regression constant
k = Elasticity coefficient (Regression coefficient)

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across the state of Rajasthan. Toll plazas at Lambia Kalan and Jojro ka Khera are in the state of Rajasthan. For elasticity calculations, working data from Rajasthan has been analyzed. Additionally, data of Gujarat is also analyzed as project corridor has close transportation link with Gujarat also.

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-1 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	57192	591069	4.76	5.77		
2013	58441	659542	4.77	5.82	2%	
2014	61053	733916	4.79	5.87	4%	
2015	64496	814079	4.81	5.91	6%	
2016	68565	899307	4.84	5.95	6%	

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2017	71394	988391	4.85	5.99	4%	4.55%

Regression analysis of same is given in figure below.

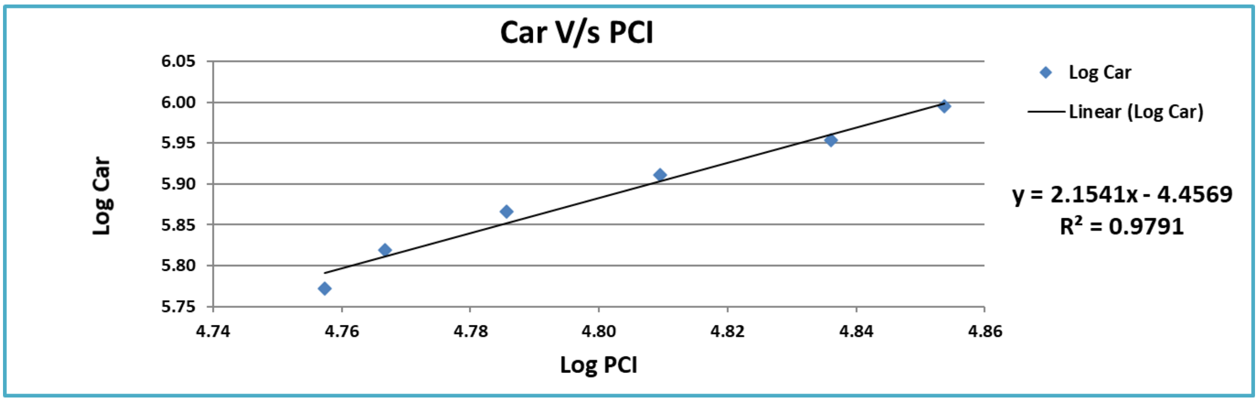

Figure 5-1: Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-2 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	68548437	83345	7.84	4.92		
2013	69783885	88616	7.84	4.95	2%	
2014	71016445	93892	7.85	4.97	2%	
2015	72245688	97650	7.86	4.99	2%	
2016	73471198	102818	7.87	5.01	2%	
2017	74692571	108680	7.87	5.04	2%	1.73%

Regression analysis of same is given in figure below.

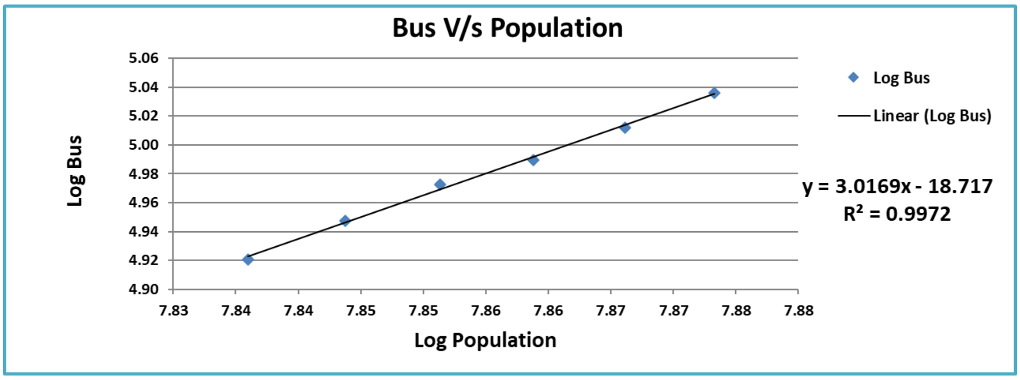

Figure 5-2: Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Rajasthan

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth
2012	395331	69509	5.60	4.84		
2013	409802	76396	5.61	4.88	4%	
2014	434292	33379	5.64	4.52	6%	
2015	465408	91787	5.67	4.96	7%	
2016	501922	99763	5.70	5.00	8%	6.16%

The following figure depicts regression analysis and extrapolation.

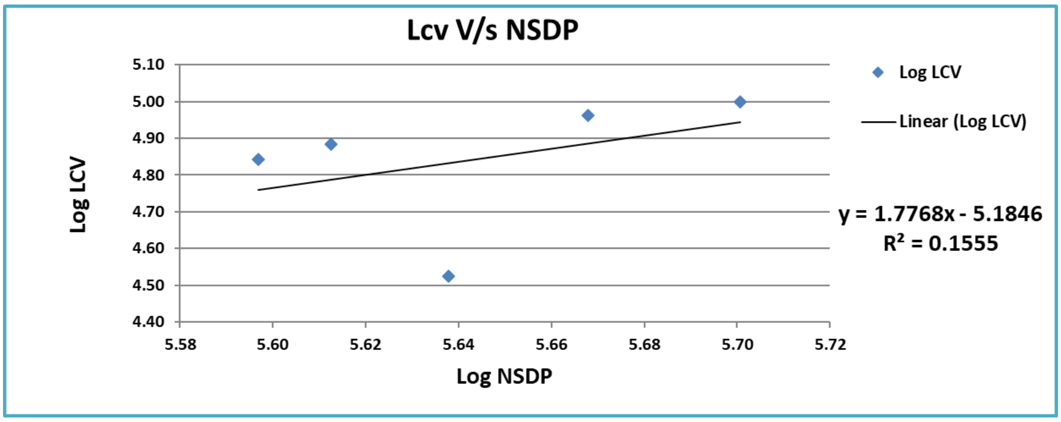

Figure 5-3: Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Rajasthan.

The following figure depicts regression analysis and extrapolation.

Table 5-4 : Truck Traffic Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth
2012	395331	362028	5.60	5.56		
2013	409802	401983	5.61	5.60	4%	
2014	434292	434379	5.64	5.64	6%	
2015	465408	472365	5.67	5.67	7%	
2016	501922	517604	5.70	5.71	8%	
2017	530172	561158	5.72	5.75	6%	6.06%

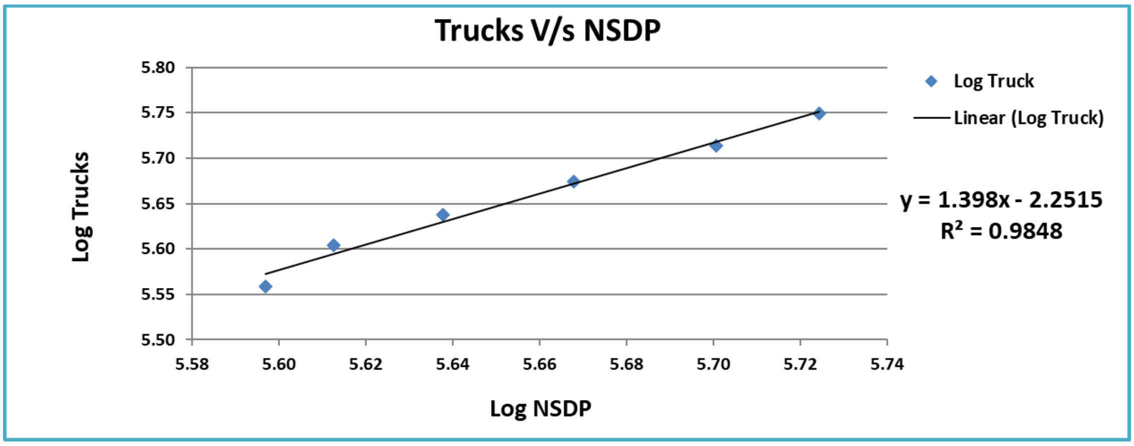

Figure 5-4: Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Rajasthan.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for the good fit regression as reflected by R2 values are presented in the Table below.

Table 5-5 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Rajasthan	Car/Jeep	PCI	y = 2.1541x + -4.4569	R^2 = 0.9791	2.1541	4.55%	9.79%	Good Regression
	Bus	Population	y = 3.0169x - -18.7174	R^2 = 0.9972	3.0169	1.73%	5.22%	Good Regression
	LCV	NSDP	y = 1.7768x - -5.1846	R^2 = 0.1555	1.7768	6.16%	10.95%	Poor Regression
	Truck	NSDP	y = 1.398x - -2.2515	R^2 = 0.9848	1.3980	6.06%	8.46%	Good Regression

Table 5-6 : Per Capita Income Vs Car Gujarat

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	87481	1411898	4.94	6.15		
2013	96683	1602129	4.99	6.20	11%	
2014	102589	1771298	5.01	6.25	6%	
2015	111370	2008748	5.05	6.30	9%	

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2016	120683	2260084	5.08	6.35	8%	
2017	129738	2527537	5.11	6.40	8%	8.21%

Regression analysis of same is given in figure below.

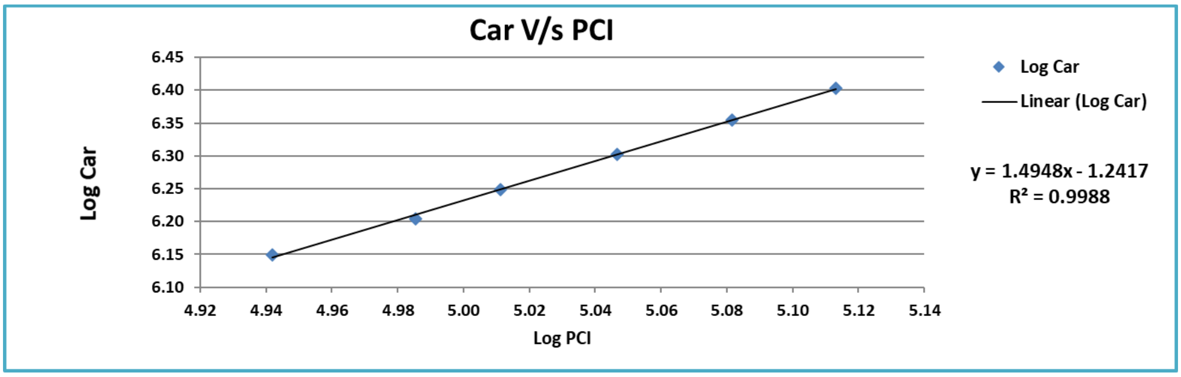

Figure 5-5: Regression and Elasticity PCI vs. Car – Extrapolation Gujarat

Table 5-7 : Population Vs Bus Gujarat

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	60439692	67546	7.78	4.83		
2013	61563037	70615	7.79	4.85	2%	
2014	62684375	72998	7.80	4.86	2%	
2015	63803304	76435	7.80	4.88	2%	
2016	64919427	82734	7.81	4.92	2%	
2017	66032362	74855	7.82	4.87	2%	1.79%

Regression analysis of same is given in figure below.

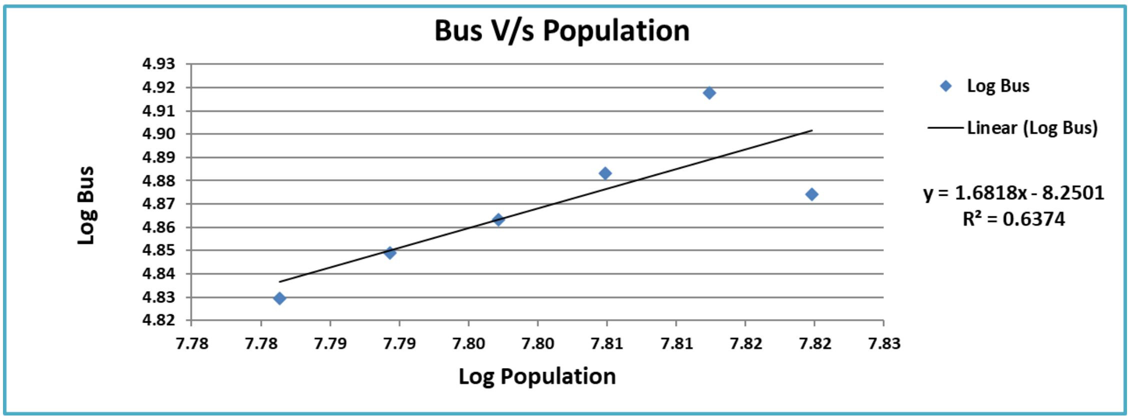

Figure 5-6: Regression and Elasticity Population vs. Bus – Extrapolation Gujarat

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Gujarat

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth
2012	532809	448958	5.73	5.65		
2013	596659	499277	5.78	5.70	12%	
2014	641489	542918	5.81	5.73	8%	
2015	705629	589984	5.85	5.77	10%	
2016	774775	633599	5.89	5.80	10%	9.82%

The following figure depicts regression analysis and extrapolation.

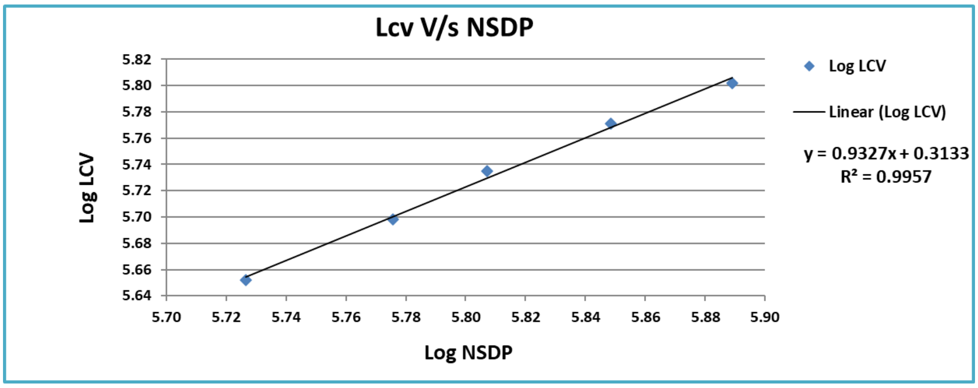

Figure 5-7: Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Gujarat.

The following figure depicts regression analysis and extrapolation.

Table 5-9 : Truck Traffic Vs NSDP Gujarat

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth
2012	532809	301533	5.73	5.48		
2013	596659	319207	5.78	5.50	12%	
2014	641489	332185	5.81	5.52	8%	
2015	705629	352225	5.85	5.55	10%	
2016	774775	375265	5.89	5.57	10%	
2017	843930	396061	5.93	5.60	9%	9.64%

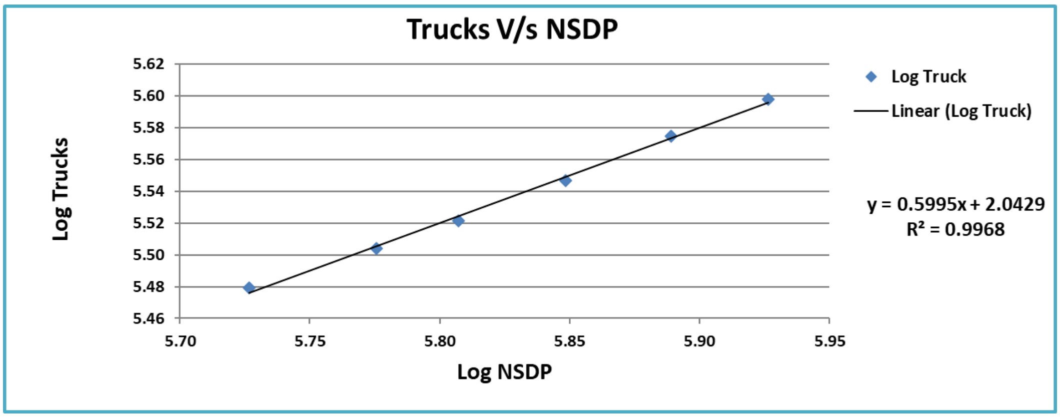

Figure 5-8: Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Gujarat.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-10 : Summary Regression Analysis Gujarat

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Gujarat	Car/Jeep	PCI	y = 1.4948x + -1.2417	R^2 = 0.9988	1.4948	8.21%	12.27%	Good Regression
	Bus	Population	y = 1.6818x - -8.2501	R^2 = 0.6374	1.6818	1.79%	3.00%	Fair Regression
	LCV	NSDP	y = 0.9327x - 0.3133	R^2 = 0.9957	0.9327	9.82%	9.16%	Good Regression
	Truck	NSDP	y = 0.5995x - 2.0429	R^2 = 0.9968	0.5995	9.64%	5.78%	Good Regression

The economic model for predicting growth is a good tool, however other local, regional, and national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trends of growth. Project stretch of Gulabpura to Chittorgarh is under tolling operation with current concessionaire and has two year of tolling history from 2018-19. As traffic data available with the project concessionaire is of year two years and that too affected by COVI-19, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years' consistent traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economic, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

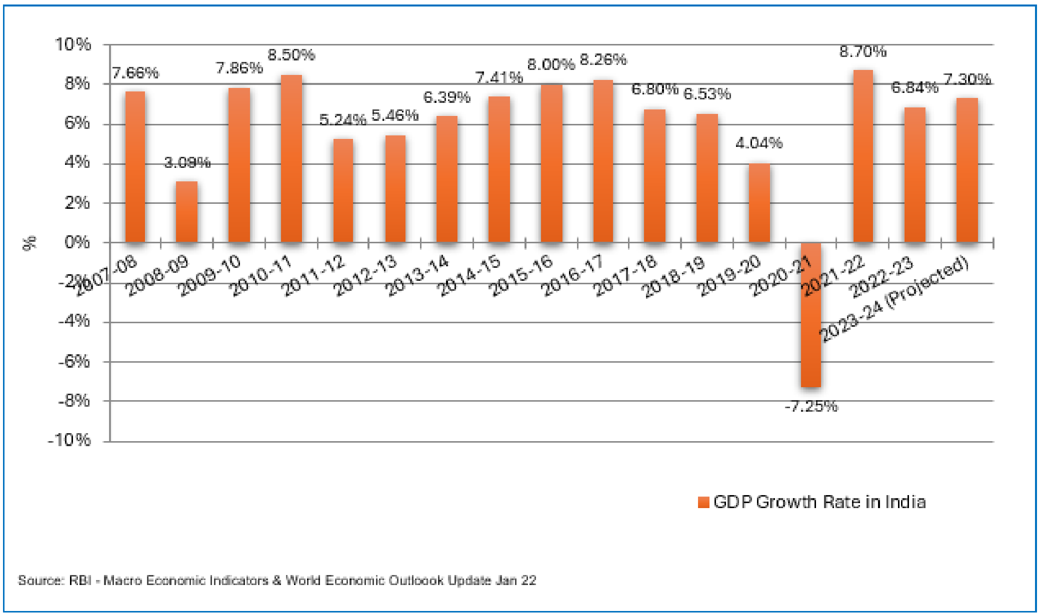

Figure 5-9 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on Make -In- India it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. The World Economic Outlook update also has predicted a growth rate of about 7.5 % in the year 2022-23.

5.6 Developments along and around the Project Corridor & State

This Asset primarily serves traffic travelling between Delhi, Rajasthan, Gujarat and Maharashtra. It is observed that the vehicle distribution to be dominated by heavy vehicles. We further noticed several textile industries and marble/granite industries bordering the Asset. Udaipur serves as a big tourism hub as well as a consumption centre which also results in traffic feeding into the demand being generated.

In addition, Chittorgarh has 4 major cement plants located in Chanderiya and Nimbahera villages. There is a regular movement of Cement bulkers to and from these locations along asset. Chanderiya Lead-Zinc Smelter, is the one of the largest zinc-lead smelting complexes in the world, is also located in Chittorgarh. Bhilwara is home to the textile industry and the only centre in the country producing insulation bricks. Mining is another major sector for large scale mining of sandstone, soapstone feldspar, quartz, mica China clay and granite. Also, Iron Ore, Led, and Zinc are mined and processed in Bhilwara.

Rajasthan is rich in natural resources and benefits from its strategic geographic location in India. The state is pre-eminent in quarrying, mining in India and has been a leader in crude oil extraction over the past few years. Moreover, Rajasthan is also major tourism attractor in India. Considering the scenario, it may be assumed that the traffic growth on the project highway would remain high and there are minimal risks in terms of growth.

5.6.1 Industrial Units along Project Corridor

Bhilwara district occupies an important place in the mineral map of Rajasthan. The main minerals are lead Zinc, Soap Stone, China Clay, Feldspar, Quartz, Mica, Asbestos and Garnet.

Besides being a major tourist attraction in India Chittorgarh has a very rich profile in industrial mineral extraction. Limestone (Cement Grade), Red Occur, Silica sand, China Clay and Quartz are major minerals which are in abundance. There are a large number of cement plants in the area. Chanderiya Lead-Zinc Smelter is one of the largest zinc-lead smelting complexes in the world.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as below. The rate of growth is moderate in light of overall regional trends. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, the rate of growth diminishes. The same growth rate is not sustainable for long. Traffic growth is suitably stepped down fro future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely Optimistic, **Pessimistic and Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-11 : Recommended Growth Rates Optimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.61%	8.31%	7.01%	6.58%	6.33%	6.09%
Bus	4.93%	4.73%	3.77%	3.56%	3.41%	3.26%
LCV	5.19%	4.89%	3.83%	3.34%	3.08%	2.83%
2- Axle	5.68%	5.38%	4.55%	4.05%	3.78%	3.53%
3 – Axle	6.02%	5.71%	4.55%	4.05%	3.78%	3.53%
4 to 6 Axle	6.37%	6.03%	4.55%	4.05%	3.78%	3.53%
7 and Above Axle	6.02%	5.71%	4.55%	4.05%	3.78%	3.53%

Table 5-12 : Recommended Growth Rates Pessimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.11%	7.81%	6.51%	6.08%	5.83%	5.59%
Bus	4.43%	4.23%	3.27%	3.06%	2.91%	2.76%
LCV	4.69%	4.39%	3.33%	2.84%	2.58%	2.33%
2- Axle	5.18%	4.88%	4.05%	3.55%	3.28%	3.03%
3 – Axle	5.52%	5.21%	4.05%	3.55%	3.28%	3.03%
4 to 6 Axle	5.87%	5.53%	4.05%	3.55%	3.28%	3.03%
7 and Above Axle	5.52%	5.21%	4.05%	3.55%	3.28%	3.03%

Table 5-13 : Recommended Growth Rates Most Likely

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.36%	8.06%	6.76%	6.33%	6.08%	5.84%
Bus	4.68%	4.48%	3.52%	3.31%	3.16%	3.01%
LCV	4.94%	4.64%	3.58%	3.09%	2.83%	2.58%
2- Axle	5.43%	5.13%	4.30%	3.80%	3.53%	3.28%
3 - Axle	5.77%	5.46%	4.30%	3.80%	3.53%	3.28%
4 to 6 Axle	6.12%	5.78%	4.30%	3.80%	3.53%	3.28%
7 and Above Axle	5.77%	5.46%	4.30%	3.80%	3.53%	3.28%

Traffic and revenue have been worked out on the basis of the above growths and some is presented in subsequent chapter of report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Lambia Kalan121.020 KM (Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	6851	754	455	2520	1869	5130	12	17590	45650
2024-25	7390	804	459	2655	1978	5440	12	18738	48406
2025-26	8013	829	495	2804	2089	5777	12	20019	51471
2026-27	8627	882	499	2947	2205	6108	12	21280	54443
2027-28	9352	910	537	3113	2329	6484	12	22737	57886
2028-29	10072	967	542	3272	2458	6858	12	24181	61254
2029-30	10920	999	583	3456	2598	7280	12	25848	65144
2030-31	11624	1050	585	3604	2712	7594	12	27181	68129
2031-32	12457	1075	623	3777	2835	7949	12	28728	71599
2032-33	13264	1129	626	3937	2960	8292	12	30220	74895
2033-34	14213	1156	666	4126	3093	8679	12	31945	78712
2034-35	15138	1215	670	4302	3231	9056	12	33624	82376
2035-36	16155	1238	710	4488	3361	9433	12	35397	86192
2036-37	17146	1295	714	4656	3493	9797	12	37113	89818
2037-38	18299	1320	755	4857	3634	10203	12	39080	93985
2038-39	19426	1381	761	5040	3778	10598	12	40996	97980
2039-40	20728	1408	805	5258	3930	11036	12	43177	102535
2040-41	21958	1469	811	5442	4076	11437	12	45205	106669
2041-42	23377	1494	857	5663	4230	11880	12	47513	111382

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Jojro ka Khera184.020 KM (Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	6077	777	435	2613	2042	5971	12	17926	49431
2024-25	6600	816	457	2760	2165	6351	12	19161	52604
2025-26	7149	856	478	2908	2289	6734	12	20426	55815
2026-27	7742	898	500	3064	2420	7140	12	21776	59225
2027-28	8384	941	523	3228	2557	7570	12	23215	62839
2028-29	9080	987	548	3401	2702	8026	12	24756	66685
2029-30	9834	1034	575	3583	2855	8510	12	26403	70773
2030-31	10523	1074	597	3746	2985	8897	12	27834	74209
2031-32	11260	1115	619	3915	3120	9302	12	29343	77808
2032-33	12048	1157	642	4092	3262	9725	12	30938	81588
2033-34	12890	1200	665	4278	3410	10167	12	32622	85555
2034-35	13793	1246	690	4471	3565	10628	12	34405	89720
2035-36	14701	1287	714	4651	3709	11057	12	36131	93664
2036-37	15667	1329	739	4839	3858	11504	12	37948	97791
2037-38	16698	1372	766	5035	4014	11969	12	39866	102116
2038-39	17795	1418	793	5238	4176	12453	12	41885	106636
2039-40	18965	1465	821	5449	4345	12957	12	44014	111368
2040-41	20165	1510	849	5654	4509	13447	12	46146	116032
2041-42	21441	1556	877	5867	4680	13955	12	48388	120899

Table 6-3 : Total Tollable Traffic @ Toll Plaza 1- Lambia Kalan121.020 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	6851	754	455	2520	1869	5130	12	17590	45650
2024-25	7357	801	457	2643	1970	5415	12	18655	48190
2025-26	7942	822	491	2778	2071	5724	12	19840	51007
2026-27	8510	870	494	2906	2177	6022	12	20991	53699
2027-28	9186	893	529	3055	2289	6365	12	22329	56841
2028-29	9847	946	533	3197	2405	6698	12	23638	59866
2029-30	10629	972	570	3359	2529	7080	12	25151	63375
2030-31	11259	1018	569	3487	2628	7347	12	26320	65954
2031-32	12014	1036	605	3635	2735	7657	12	27694	69004
2032-33	12731	1085	604	3774	2843	7946	12	28995	71833
2033-34	13584	1104	642	3933	2958	8282	12	30515	75162
2034-35	14398	1157	641	4085	3074	8596	12	31963	78270
2035-36	15300	1172	680	4236	3183	8915	12	33498	81527
2036-37	16158	1222	678	4379	3292	9210	12	34951	84537
2037-38	17168	1238	718	4540	3409	9551	12	36636	88060
2038-39	18136	1291	716	4693	3525	9869	12	38242	91339
2039-40	19269	1307	758	4866	3651	10233	12	40096	95157
2040-41	20312	1360	755	5018	3765	10549	12	41771	98491

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2041-42	21531	1374	798	5189	3891	10909	12	43704	102371

Table 6-4 : Total Tollable Traffic @Toll Plaza 2- Jojro ka Khera184.020 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	6077	777	435	2613	2042	5971	12	17926	49431
2024-25	6569	814	454	2748	2153	6322	12	19072	52358
2025-26	7082	848	472	2882	2264	6671	12	20231	55282
2026-27	7635	884	491	3023	2381	7040	12	21466	58380
2027-28	8231	923	510	3170	2504	7429	12	22779	61652
2028-29	8873	964	531	3324	2635	7840	12	24179	65123
2029-30	9566	1006	552	3486	2772	8273	12	25667	68788
2030-31	10189	1039	570	3627	2884	8608	12	26929	71781
2031-32	10853	1072	588	3773	3000	8956	12	28254	74900
2032-33	11559	1106	606	3926	3120	9318	12	29647	78159
2033-34	12310	1141	625	4084	3246	9695	12	31113	81568
2034-35	13110	1179	644	4249	3378	10087	12	32659	85137
2035-36	13905	1212	663	4400	3496	10443	12	34131	88448
2036-37	14749	1245	682	4556	3619	10814	12	35677	91905
2037-38	15645	1279	702	4717	3748	11197	12	37300	95505
2038-39	16594	1314	723	4884	3881	11593	12	39001	99252
2039-40	17603	1351	744	5057	4018	12004	12	40789	103159
2040-41	18629	1385	765	5223	4150	12398	12	42562	106966
2041-42	19716	1419	787	5394	4286	12805	12	44419	110922

Traffic projections for Most Likely scenario is given as under

Table 6-5 : Total Tollable Traffic @ Toll Plaza 1- Lambia Kalan121.020 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	6851	754	455	2520	1869	5130	12	17590	45650
2024-25	7374	803	458	2650	1974	5426	12	18697	48296
2025-26	7979	827	493	2792	2080	5749	12	19932	51239
2026-27	8569	878	497	2927	2191	6063	12	21137	54069
2027-28	9271	904	534	3085	2308	6424	12	22538	57370
2028-29	9960	958	538	3234	2431	6776	12	23909	60552
2029-30	10776	988	578	3409	2561	7178	12	25502	64257
2030-31	11443	1036	578	3545	2669	7466	12	26749	67024
2031-32	12236	1059	616	3707	2782	7800	12	28212	70294

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2032-33	12999	1111	616	3855	2899	8114	12	29606	73343
2033-34	13898	1135	656	4031	3022	8477	12	31231	76928
2034-35	14767	1190	657	4192	3149	8820	12	32787	80290
2035-36	15724	1210	697	4363	3267	9169	12	34442	83835
2036-37	16647	1263	697	4516	3389	9496	12	36020	87134
2037-38	17726	1284	739	4699	3516	9870	12	37846	90983
2038-39	18772	1340	740	4863	3647	10223	12	39597	94590
2039-40	19987	1362	783	5062	3784	10626	12	41616	98788
2040-41	21123	1418	784	5226	3915	10979	12	43457	102485
2041-42	22438	1438	828	5426	4052	11384	12	45578	106795

Table 6-6 : Total Tollable Traffic @ Toll Plaza 2- Jojro ka Khera184.020 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	6077	777	435	2613	2042	5971	12	17926	49431
2024-25	6584	815	455	2755	2160	6337	12	19118	52487
2025-26	7115	854	474	2896	2277	6704	12	20332	55559
2026-27	7689	894	494	3044	2401	7091	12	21625	58811
2027-28	8307	935	515	3200	2532	7501	12	23002	62259
2028-29	8977	978	537	3364	2670	7934	12	24472	65914
2029-30	9700	1023	560	3535	2815	8393	12	26038	69787
2030-31	10355	1059	579	3687	2934	8753	12	27379	72986
2031-32	11054	1098	598	3845	3060	9129	12	28796	76345
2032-33	11800	1138	618	4010	3192	9521	12	30291	79866
2033-34	12596	1179	639	4181	3329	9930	12	31866	83551
2034-35	13446	1221	661	4360	3472	10357	12	33529	87417
2035-36	14296	1260	682	4525	3604	10750	12	35129	91048
2036-37	15199	1299	704	4696	3740	11157	12	36807	94828
2037-38	16161	1339	726	4874	3882	11580	12	38574	98780
2038-39	17184	1380	749	5059	4029	12019	12	40432	102905
2039-40	18272	1422	772	5250	4181	12475	12	42384	107206
2040-41	19384	1462	795	5435	4328	12915	12	44331	111423
2041-42	20562	1503	820	5626	4480	13371	12	46374	115818

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Gulabpura-Chittorgarh project, the Target Date and Target Traffic are defined as under:

Target Date - 1stJune 2026

Target Traffic - 76316 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. Probable extension of concession period is estimated according to article 29 of concession agreement which comes to about 3-4 years Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76316	56551	-26%	39%	20%	20	4

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76316	56946	-25%	38%	20%	20	4

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76316	56143	-26%	40%	20%	20	4

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Gulabpura-Chittorgarh section of NH-19 is based on the old toll policy. As per the Toll Notification (Schedule -G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued for 50 trips in month at 2/3d rate. Additionally, concessionaire has announced special monthly passes for local commercial cars at Rs. 670.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
   a) Local Car Jeep Van I - Rs. 275 per
   b) Local LCV - Rs. 1200 per trip
   c) Local Commercial Vehicles at 50% rate for single journey

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A} - \text{WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

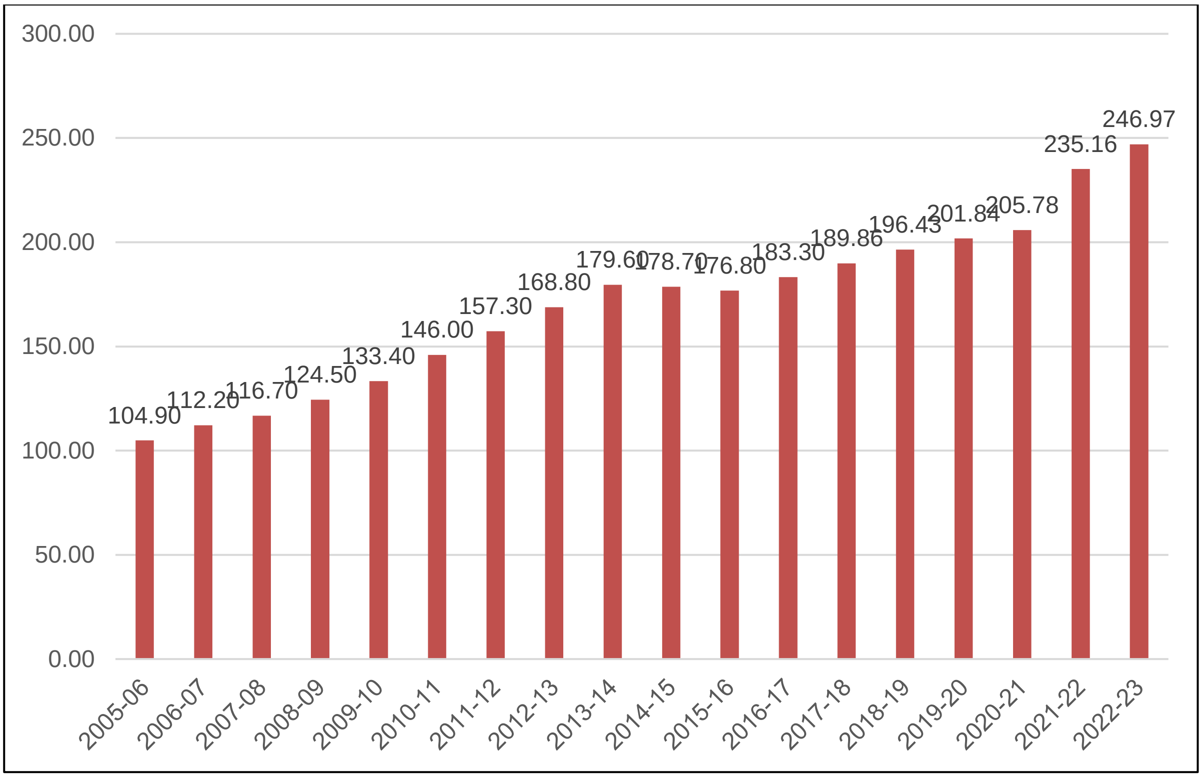

Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under.

Table 7-2 : Toll Rates for Single Journey@ Km 121.020

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2023-24	95	155	325	325	355	510	620
2024-25	100	160	335	335	365	520	635
2025-26	105	165	350	350	380	550	670
2026-27	110	175	370	370	400	575	700
2027-28	115	185	385	385	420	605	735
2028-29	120	195	405	405	445	635	775
2029-30	125	205	425	425	465	670	815
2030-31	135	215	450	450	490	705	855
2031-32	140	225	470	470	515	740	900
2032-33	145	235	495	495	540	780	950
2033-34	155	250	520	520	570	820	995
2034-35	160	260	550	550	600	860	1050
2035-36	170	275	580	580	630	905	1105
2036-37	180	290	610	610	665	955	1165
2037-38	190	305	640	640	700	1005	1225
2038-39	200	320	675	675	735	1060	1290
2039-40	210	340	710	710	775	1115	1360
2040-41	220	360	750	750	820	1175	1430
2041-42	235	375	790	790	860	1240	1510

Table 7-3 : Toll Rates for Single Journey @ Km 184.020

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2023-24	100	160	335	335	370	530	645
2024-25	100	165	345	345	375	540	660
2025-26	105	175	365	365	395	570	695
2026-27	115	180	380	380	415	600	730
2027-28	120	190	400	400	435	630	765
2028-29	125	200	420	420	460	660	805
2029-30	130	210	445	445	485	695	845
2030-31	135	220	465	465	510	730	890
2031-32	145	235	490	490	535	765	935
2032-33	150	245	515	515	560	805	985
2033-34	160	260	540	540	590	850	1035
2034-35	170	270	570	570	620	895	1090
2035-36	175	285	600	600	655	940	1145
2036-37	185	300	630	630	690	990	1205
2037-38	195	315	665	665	725	1045	1270
2038-39	205	335	700	700	765	1100	1335
2039-40	220	350	740	740	805	1155	1410
2040-41	230	370	775	775	850	1220	1485
2041-42	240	390	820	820	895	1285	1565

Table 7-4 : Toll Rates for Return Journey @ Km 121.02

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2023-24	145	235	490	490	530	765	930
2024-25	150	240	500	500	545	785	955
2025-26	155	250	525	525	575	825	1000
2026-27	165	265	550	550	600	865	1055
2027-28	170	275	580	580	630	910	1105
2028-29	180	290	610	610	665	955	1165
2029-30	190	305	640	640	700	1005	1220
2030-31	200	320	675	675	735	1055	1285
2031-32	210	340	710	710	770	1110	1350
2032-33	220	355	745	745	810	1170	1420
2033-34	230	375	785	785	855	1230	1495
2034-35	245	395	825	825	900	1295	1575
2035-36	255	415	870	870	945	1360	1655
2036-37	270	435	915	915	995	1430	1745
2037-38	285	460	960	960	1050	1510	1835
2038-39	300	485	1015	1015	1105	1590	1935
2039-40	315	510	1065	1065	1165	1675	2035
2040-41	330	535	1125	1125	1225	1765	2145
2041-42	350	565	1185	1185	1295	1860	2260

Table 7-5 : Toll Rates for Return Journey @ Km 184.020

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2023-24	150	240	505	505	550	795	965
2024-25	155	245	520	520	565	815	990
2025-26	160	260	545	545	595	855	1040
2026-27	170	275	570	570	625	895	1090
2027-28	180	285	600	600	655	940	1145
2028-29	185	300	630	630	690	990	1205
2029-30	195	315	665	665	725	1040	1265
2030-31	205	335	700	700	760	1095	1330
2031-32	215	350	735	735	800	1150	1400
2032-33	230	370	770	770	840	1210	1475
2033-34	240	390	810	810	885	1275	1550
2034-35	255	410	855	855	935	1340	1630
2035-36	265	430	900	900	980	1410	1720
2036-37	280	450	945	945	1035	1485	1810
2037-38	295	475	995	995	1090	1565	1905
2038-39	310	500	1050	1050	1145	1645	2005
2039-40	325	530	1105	1105	1205	1735	2115
2040-41	345	555	1165	1165	1270	1830	2225
2041-42	365	585	1230	1230	1340	1925	2345

Table 7-6 : Toll Rates for Monthly Pass Local @ Km 121.020

Year	Car	Minibus /LCV
2023-24	330	1470
2024-25	340	1485
2025-26	355	1560
2026-27	375	1640
2027-28	390	1720
2028-29	410	1805
2029-30	435	1895
2030-31	455	1990
2031-32	480	2090
2032-33	505	2195
2033-34	530	2305
2034-35	560	2420
2035-36	585	2540
2036-37	620	2665
2037-38	650	2800
2038-39	685	2940
2039-40	720	3085
2040-41	760	3240
2041-42	800	3400

Table 7-7 : Toll Rates for Monthly Pass Local @ Km 184.020

Year	Car	Minibus /LCV
2023-24	330	1165
2024-25	340	1175
2025-26	355	1235
2026-27	375	1295
2027-28	390	1360
2028-29	410	1430
2029-30	435	1500
2030-31	455	1575
2031-32	480	1655
2032-33	505	1740
2033-34	530	1825
2034-35	560	1915
2035-36	585	2010
2036-37	620	2110
2037-38	650	2215
2038-39	685	2325
2039-40	720	2440
2040-41	760	2560
2041-42	800	2690

Table 7-8 : Toll Rates for Monthly Pass @ Km 121.020

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2023-24	3200	5170	10835	10835	11820	16995	20690
2024-25	3280	5300	11105	11105	12115	17415	21200
2025-26	3445	5565	11665	11665	12725	18290	22265
2026-27	3620	5850	12255	12255	13365	19215	23395
2027-28	3805	6145	12875	12875	14045	20190	24580
2028-29	4000	6460	13530	13530	14760	21220	25835
2029-30	4205	6790	14225	14225	15520	22305	27155
2030-31	4420	7140	14955	14955	16315	23455	28555
2031-32	4645	7505	15730	15730	17160	24665	30025
2032-33	4890	7895	16545	16545	18050	25945	31585
2033-34	5145	8310	17405	17405	18990	27295	33230
2034-35	5410	8740	18320	18320	19985	28725	34970
2035-36	5695	9200	19280	19280	21035	30235	36810
2036-37	5995	9690	20300	20300	22145	31830	38750
2037-38	6315	10200	21375	21375	23315	33520	40805
2038-39	6650	10745	22510	22510	24560	35305	42980
2039-40	7005	11320	23715	23715	25870	37190	45275
2040-41	7385	11925	24990	24990	27260	39185	47705
2041-42	7780	12570	26335	26335	28730	41300	50275

Table 7-9 : Toll Rates for Monthly Pass @ Km 184.02

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2023-24	3320	5365	11240	11240	12260	17625	21455
2024-25	3400	5495	11515	11515	12560	18060	21985
2025-26	3575	5775	12095	12095	13195	18970	23090
2026-27	3755	6065	12705	12705	13860	19925	24260
2027-28	3945	6375	13350	13350	14565	20940	25490
2028-29	4145	6700	14035	14035	15310	22005	26790
2029-30	4360	7040	14750	14750	16095	23135	28160
2030-31	4585	7405	15510	15510	16920	24325	29610
2031-32	4820	7785	16310	16310	17795	25580	31140
2032-33	5070	8190	17155	17155	18715	26905	32755
2033-34	5335	8615	18050	18050	19690	28305	34460
2034-35	5610	9065	18995	18995	20725	29790	36265
2035-36	5905	9545	19995	19995	21810	31355	38170
2036-37	6220	10045	21050	21050	22965	33010	40185
2037-38	6550	10580	22165	22165	24180	34760	42315
2038-39	6900	11140	23345	23345	25470	36610	44570
2039-40	7265	11740	24595	24595	26830	38565	46950
2040-41	7655	12370	25915	25915	28270	40635	49470
2041-42	8070	13035	27310	27310	29795	42825	52135

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under most likely scenario at each of the toll plaza up to 2041- 42 starting from the year 2023-24 are shown in tables below.

Table 7-10 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	179.77	202.66	**382.43**
2024-25	195.69	219.43	**415.12**
2025-26	218.10	245.10	**463.20**
2026-27	243.02	273.50	**516.53**
2027-28	271.24	305.53	**576.77**
2028-29	301.72	339.01	**640.73**
2029-30	336.62	378.65	**715.27**
2030-31	372.47	416.44	**788.92**
2031-32	410.70	460.07	**870.77**
2032-33	451.41	505.32	**956.73**
2033-34	498.52	558.27	**1056.79**
2034-35	549.15	616.50	**1165.64**
2035-36	605.07	677.27	**1282.34**
2036-37	664.60	742.18	**1406.78**
2037-38	730.43	816.54	**1546.97**
2038-39	803.66	897.14	**1700.80**
2039-40	885.52	988.77	**1874.29**
2040-41	969.76	1082.31	**2052.07**
2041-42	1066.32	1187.18	**2253.49**

Table 7-11 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	179.77	202.66	**382.43**
2024-25	194.78	218.42	**413.21**
2025-26	216.02	242.81	**458.83**
2026-27	239.55	269.60	**509.15**
2027-28	266.11	299.72	**565.83**
2028-29	294.67	331.05	**625.72**
2029-30	327.24	367.99	**695.23**
2030-31	360.24	402.80	**763.05**
2031-32	395.24	442.81	**838.05**
2032-33	432.31	484.01	**916.32**
2033-34	475.12	532.08	**1007.20**

Year	TP-1	TP2	Total
2034-35	520.93	584.71	**1105.64**
2035-36	571.17	639.21	**1210.38**
2036-37	624.33	697.13	**1321.45**
2037-38	682.92	763.21	**1446.13**
2038-39	747.88	834.49	**1582.37**
2039-40	820.07	915.45	**1735.52**
2040-41	893.78	997.22	**1891.01**
2041-42	978.01	1088.73	**2066.74**

Table 7-12 : Toll Revenue Most Likely Scenario (Rs. Crores)

Year	TP-1	TP2	Total
2023-24	179.77	202.66	**382.43**
2024-25	195.20	218.93	**414.13**
2025-26	217.04	243.98	**461.01**
2026-27	241.26	271.52	**512.78**
2027-28	268.66	302.62	**571.28**
2028-29	298.19	334.99	**633.18**
2029-30	331.89	373.25	**705.14**
2030-31	366.30	409.42	**775.71**
2031-32	402.88	451.18	**854.06**
2032-33	441.84	494.34	**936.18**
2033-34	486.76	544.88	**1031.64**
2034-35	534.91	600.25	**1135.16**
2035-36	588.04	657.83	**1245.87**
2036-37	644.35	719.23	**1363.58**
2037-38	706.50	789.35	**1495.85**
2038-39	775.59	865.06	**1640.65**
2039-40	852.48	951.20	**1803.68**
2040-41	931.39	1038.63	**1970.02**
2041-42	1021.63	1136.51	**2158.13**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Gulabpura to Chittrorgarh section of NH-79 in state of Rajasthan from km 90.000 to km 214.870 nearing completion of six laning. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the busy and prominent national highway NH-79 which connects Kishangarh to Udaipur via Bhiwala and Chittorgarh. There are large number of townships, industrial corridors and other business establishments coming up along the project corridor. As discussed, the dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give a positive impact to traffic flow on the project. The following can be considered as major outcomes of the study.

a) There is a good amount of tollable traffic running on the project.

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future post COVID-19 due to various developments in area and overall development of economy.

c) The Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on the above it can be considered a stable healthy project from the traffic and revenue point of view.

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IRB INFRASTRUCTURE TRUST

HAPUR TO MORADABAD SECTION OF NH-9 IN THE STATE OF UTTAR PRADESH (KM 50.000 TO KM148.277)

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

MARCH 2024

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A-106

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GMD CONSULTANTS
NAVI MUMBAI

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, Six Laning of **Hapur Bypass to Moradabad section** of NH-9 from km 50.000 to km 148.277is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. M/s IRB Hapur Moradabad Tollway Ltd. (Concessionaire) has been awarded the Project for a concession period of 22 years starting from 28th May 2019. The Project is under capacity augmentation to six lanes. Tolling operation under current concession started in May 2019.COD-2 has been received in April 2023.

Project stretch from Hapur to Moradabad is part of new NH-9 which starts from Fazilka in Punjab and terminates in Uttarakhand at Pithoragarh. Previously this section was part of old NH-24 which is still popularly known and Delhi – Lucknow Road. New NH-9 takes off towards Pithoragarh from Rampur. A number of sections along the project road from Hapur to Moradabad have witnessed urban development along the highway. Places like Pilakhua, Babugarh, Brijghat, Gajrola and Joya are fast upcoming urban centers. Close proximity to Delhi and this being main connectivity of region to NCR is main region for this ribbon development along highway. The following figure shows the project road alignment.

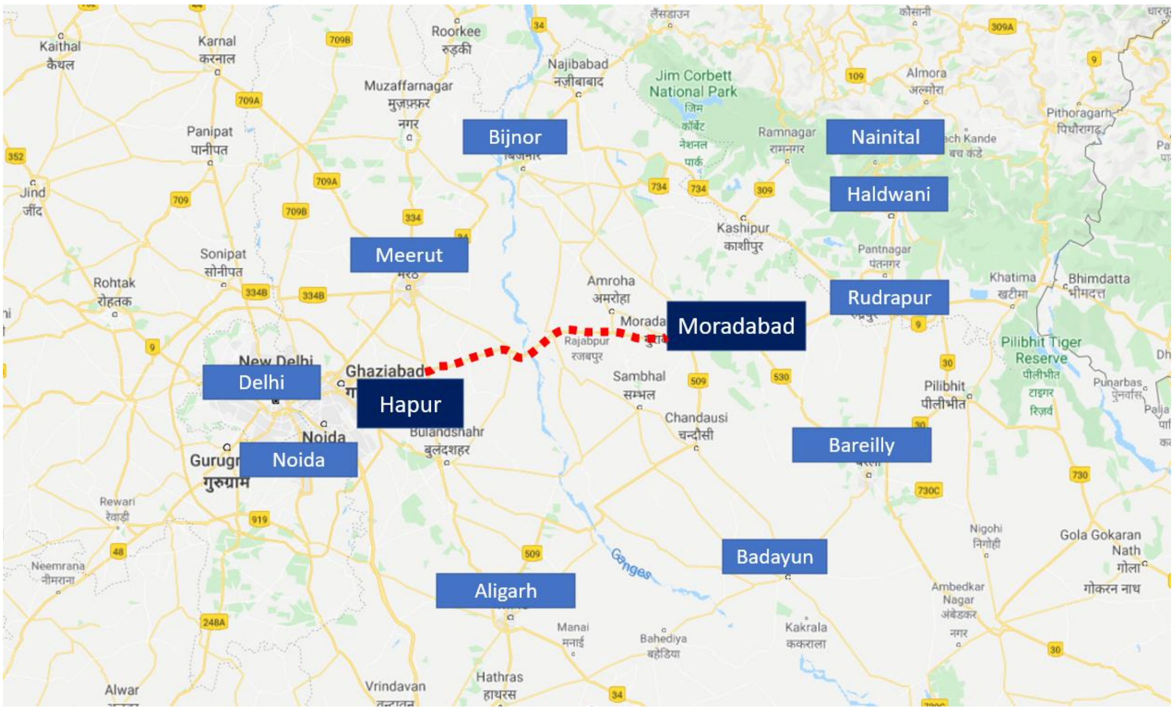

Figure 1-1: Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged GMD Consultants to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study &Toll Revenue Projection Report"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

The project road is the section of the former NH-24 which has now been re-designated as NH-9 connecting Fazilka in Punjab to Pithoragarh in Uttarakhand. On the way it connects several important cities in five states in North India (from west towards east): Malout, Sirsa, Hisar, Rohtak, Bahadurgarh, Delhi, Ghaziabad, Hapur, Moradabad, Rampur, Rudrapur, Sitarganj, Khatima, Pithoragarh. The total length of the highway is 811 Km. After renumbering of all national highways by National Highway Authority of India in2010, the current NH 9 was formed by merging five differently numbered national highways in 2010, including Old NH 10 (Fazilka-Delhi section), Old NH 24 (Delhi-Rampur section), Old NH 87 (Rampur-Rudrapur section), Old NH 74 (Rudrapur-Sitarganj-Khatima section) and Old NH 125 (Tanakpur-Pithoragarh section)

2.2 Project Stretch Description

The Project section starts from Hapur Bypass (Km50.000) and ends in Moradabad (Km148.277). The total design length of project road section is about 100 Kms. The existing road is four lane divided carriageway, which is proposed to be six laned.The road passes through the districts of Hapur, Amrohaand Moradabad; all in Uttar Pradesh.

Project road alignment passes through the small towns/built-up areas of Pakwara, Joya and Babugarh. Simbhaoli, one of the largest integrated sugar refinery complexes is right on the project road.

Hapur – Moradabad section of NH-9 was previously known as Delhi Road locally. This forms the main connectivity of areas like Moradabad, Rampur, Bareilly and important destinations in Uttarakhand like Rudrapur, Kashipur, Ranikhet, Pithoragarh etc to the national capital of Delhi.

There are two operative toll plazas at project stretch. The first is at Garh at Km 90.661 and second at Joya at Km 123.875. The following figure shows project alignment and toll plaza locations.

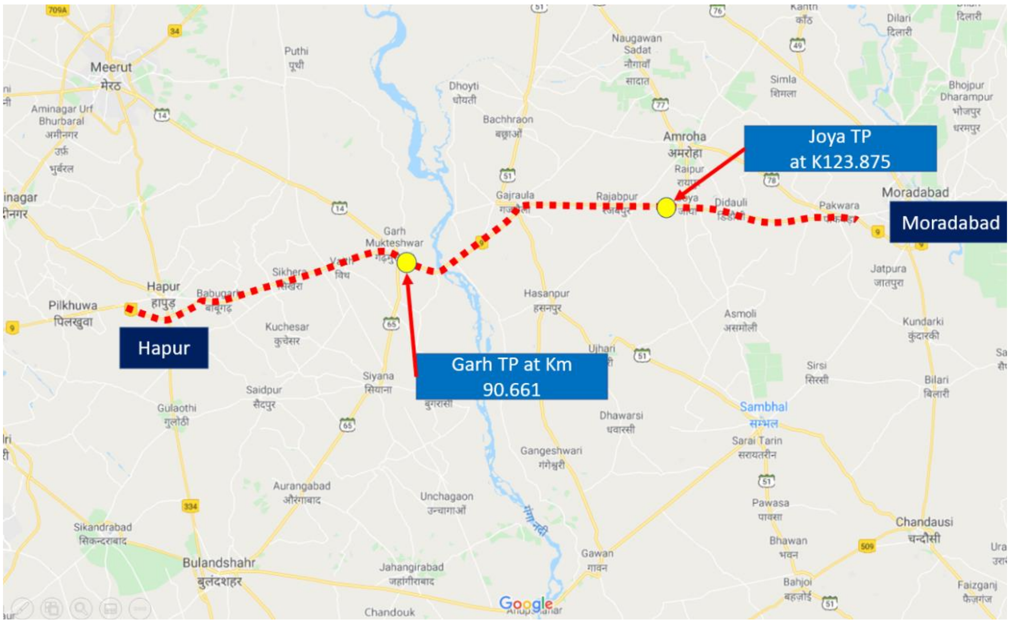

Figure 2-1: Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is in progress and will be completed soon. The following photographs illustrate the project section along the corridor.

Figure 2-2: Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Hapur Bypass- Moradabad Section of NH-9 for years 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22,22-23 and traffic data from April 2023 to November 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

ic details have been collected.

Table 3-1below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 90.661 Toll Plaza at Garh	AADT for Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023 & Eight	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023 & Eight	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023 & Eight	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022 and 2022,	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		month from April 2023 to November 2023	month from April 2023 to November 2023	month from April 2023 to November 2023	2022-2023 & Eight month from April 2023 to November 2023	2023 & Eight month from April 2023 to November 2023
2	Km 123.875 Toll Plaza at Zoro ka Khera	AADT for Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023 & Eight month from April 2023 to November 2023	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023 & Eight month from April 2023 to November 2023	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023 & Eight month from April 2023 to November 2023	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023 & Eight month from April 2023 to November 2023	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022, 2022-2023 & Eight month from April 2023 to November 2023

3.5 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicle Classification System

Vehicle Type
Auto Rickshaw

Vehicle Type	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Bus
- Truck
- 3-Axle
- Multi Axle

3.6 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.6.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23 and from April 2023 to November 2023.

Since the traffic data available for this update is for only eight months, from April 2023 to November 20223, it may not represent the whole year traffic. Additionally, during the current year traffic was impacted due to extended period of Shravan Kanwar Yatra in region. It is worthwhile to note that during Kanwar Yatra several routes are closed or diverted to facilitate this religious yatra. Hence, taking above factors into consideration, a seasonality factor for balance part of year has been applied to average traffic of current eight months to arrive at Annual Average Daily Traffic of base year 2023-24. Same corrected traffic is used for future projections and revenue calculations.

The following table shows historical traffic on project stretch and Annual Average Daily Traffic (AADT) for year 2023-24.

Table 3-3 : Traffic Data at Garh Toll Plaza at Km 90.661

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)-2019-20	Annual Average Daily Traffic (Nos.)-2020-21	Annual Average Daily Traffic (Nos.)-2021-22	Annual Average Daily Traffic (Nos.)-2022-23	Annual Average Daily Traffic (Nos.)-2023-24
1	Car	14878	15865	21889	24088	27330
2	Minibus/LCV	3704	3119	1995	1730	1743
3	Bus	2033	1573	1862	2069	2303
4	Truck	1289	1354	1674	1972	2036
5	3-Axle	1318	1105	1112	1070	1075
6	Multi Axle	1753	1635	1745	1962	2191
7	Oversized Vehicle	2	6	6	9	7
	Total	**24977**	**24657**	**30283**	**32899**	**36686**

Table 3-4 : Traffic Data at Zoya Toll Plaza at Km 123.875

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)-2019-20	Annual Average Daily Traffic (Nos.)-2020-21	Annual Average Daily Traffic (Nos.)-2021-22	Annual Average Daily Traffic (Nos.)-2022-23	Annual Average Daily Traffic (Nos.)-2023-24
1	Car	10298	10526	13695	16037	18696
2	Minibus/LCV	2595	2259	1335	1181	1191
3	Bus	1062	1303	1485	1768	2008

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)-2019-20	Annual Average Daily Traffic (Nos.)-2020-21	Annual Average Daily Traffic (Nos.)-2021-22	Annual Average Daily Traffic (Nos.)-2022-23	Annual Average Daily Traffic (Nos.)-2023-24
4	Truck	1532	1040	1184	1436	1628
5	3-Axle	1128	1064	1081	1008	936
6	Multi Axle	1365	1370	1458	1765	2017
7	Oversize Vehicle	2	8	8	9	6
	Total	**17982**	**17570**	**20246**	**23203**	**26481**

3.7 Data Analysis

3.7.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in “IRC-64-1990: Guidelines for Capacity of Roads in Rural areas”. The adopted passenger car unit values (PCU) are presented in **Table 3-5.**

Table 3-5 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0

Vehicle Type	PCUs
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-6 : Traffic in PCU at Project Stretch Base Year 2023-24

Toll Plaza Location (Km)	Year	Traffic No	PCU	PCU Index
Garh Km 90.661	**2019-2020**	24977	42251	1.69
	2020-2021	24657	40024	1.62
	2021-2022	30283	46705	1.54
	2022-2023	32899	50882	1.55
	2023-2024	36686	56079	1.53
Joya Km 123.875	**2019-2020**	17982	31508	1.75
	2020-2021	17570	30337	1.73
	2021-2022	20246	33545	1.66
	2022-2023	23203	38427	1.66
	2023-2024	26481	43300	1.64

It can be observed from above that project traffic has PCU index in range of 1.5 to 1.7 which is an indicator of high proportion of Passenger traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at four toll plaza locations.

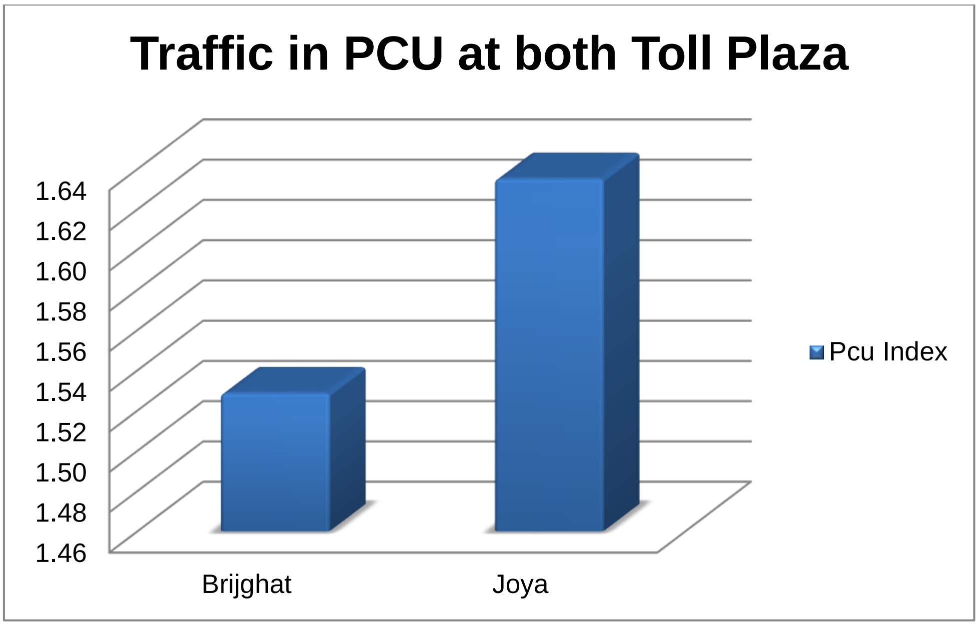

Figure 3-1: Comparison of PCU Index

It can be observed that PCU index is consistent at both toll plaza locations.

3.7.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

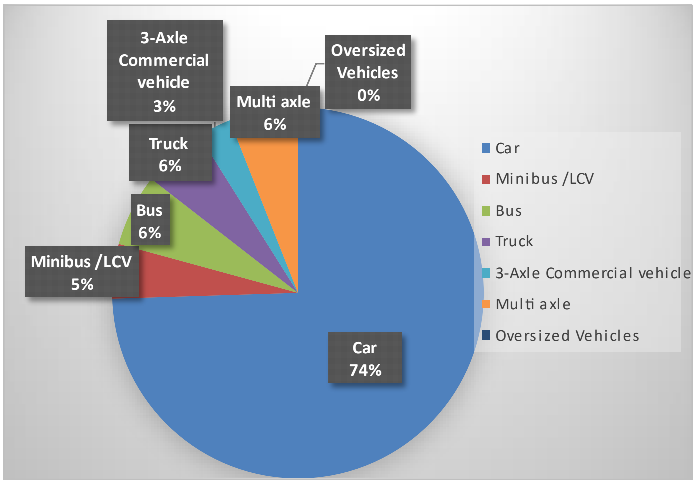

Figure 3-2: Model Split of Tollable Vehicle @TP-1

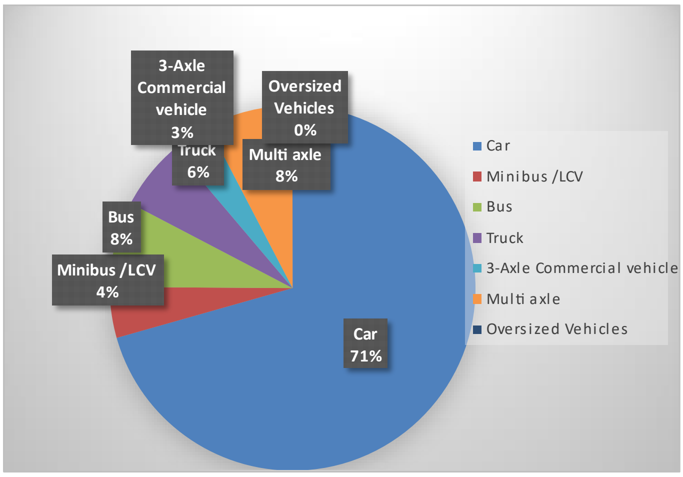

Figure 3-3: Model Split of Tollable Vehicle @TP-2

It is observed that car traffic forms about 74% - 71% of total traffic at toll plaza locations while multi axle commercial vehicles are about 9% -12% of total traffic. Truck / Bus and LCV share about 12%-14% and 5%-4% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2023-24

Table 3-7 : Journey Type Bifurcation of Traffic at GarhTP-1 KM 90.661

Sr. No	Type	Traffic Volume (Nos.)2023-24
1	Single Journey	16693
2	Return Journey	19950
3	Local Commercial Single Journey	7
4	Monthly Pass Local	29
5	Monthly Pass	7

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor. The single journey component in total traffic numbers is as high as 46%. Return journey component is 54%. The number of monthly pass local and Local Commercial Journey is 0% at Brijghat.

The following tables give the details of journey distribution at Joya toll plaza at Km 123.875.

Table 3-8 : Journey Type Bifurcation of Traffic at Zoro ka Khera TP-2 KM 121.020

Sr. No	Type	Traffic Volume (Nos.) 2023-24
1	Single Journey	14179
2	Return Journey	12275
3	Local Commercial Single Journey	11
4	Monthly Pass Local	7
5	Monthly Pass	9

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.8 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch has toll application history from last few years, and it can be assumed that project traffic is settled. However, from an analysis point of view there can be a few alternate routes at local level. Garh toll plaza is very near to the major river Ganga over which major bridge about 1 km in length is constructed. Due to this there is no locals alternative route to toll plaza at Garh. There can be one alternative route which can bypass the toll plaza at Joya. From Atrasi one can take a left and bypass Toll Plaza at Joya and go back to NH-9 at Moradabad. This route quite long and passes through congested areas of Amroha. Further the road alignment of these district roads is very poor with little chance of improvement.

The following maps show these routes in relation to project stretch at local level.

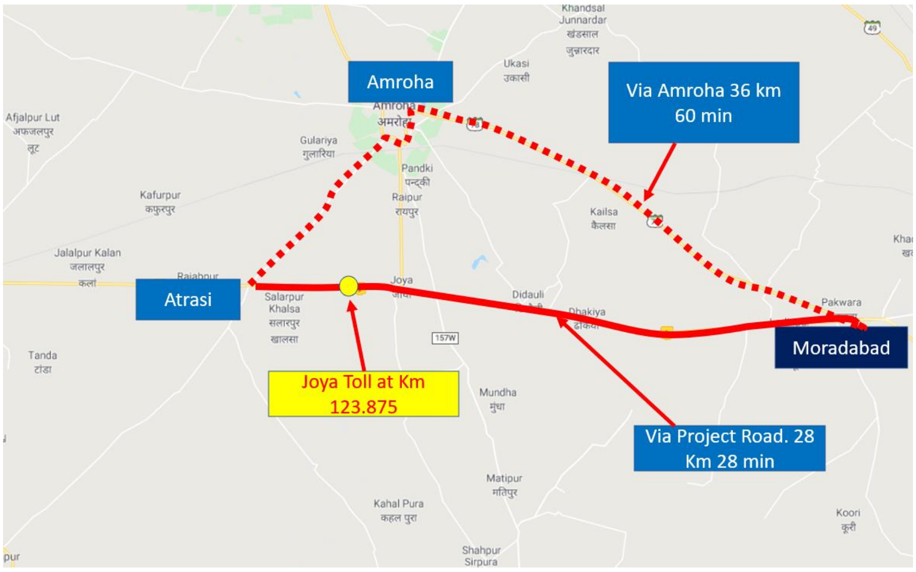

Figure 4-1: Alternate route at regional level

At regional level if we take Hisar and Rudrapur two origin destinations representing Delhi/ Haryana and Uttarakhand region, there can be one alternate via Bulandshahar – Sambhal Road. One can take Bulaandshahar road after getting down from Peripheral Expressway at after Ghaziabad. This road bypasses NH-9 between Ghaziabad and Moradabad. This route is also quite long as compared to NH-9 and also the road between Bulandshahar – Sambhal and Moradabad is poor and mostly of two-lane specifications. Hence in such case it has very little potential of any further traffic diversion from the project road.

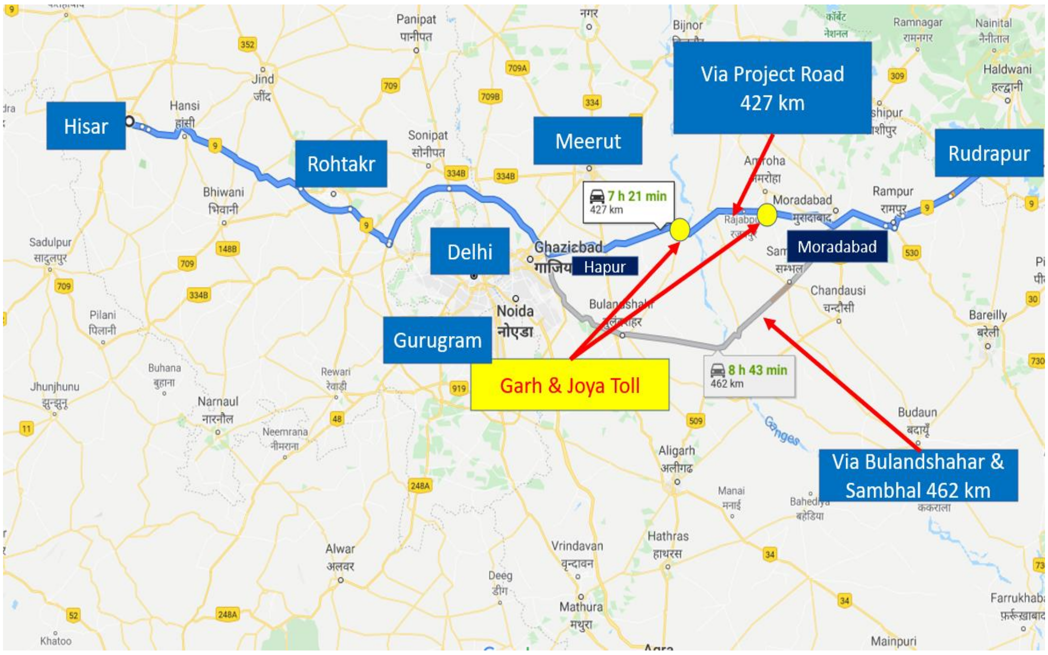

Figure 4-2: Alternate route at local level

It can be observed that the project highway forms one of the main spines of the corridor between Delhi / Ghaziabad/ Hapurand Moradabad / Rudrapur/ Haldwani. Traffic on project road is now settled and it can be assumed as dedicated traffic on project road for logistic obligations.

With six laning now nearing completion, the project stretch would become slightly more attractive due to the improved level of service. In such a case any diversion of traffic from the project road is not envisaged.

The following table provides summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Hisar-Delhi- Bulandshahar-Sambhal- Moradabad - Rudrapur	Alternate Route	462	53	8Hr 43 Min	Alternate route is longer and has poor geometrics and specifications. Traffic diversion not envisaged
	Hisar-Delhi- Hapur-Gajrola- Moradabad - Rudrapur	Project Road	427	57	7 Hr 27 Min	
Local Level						
2	Atrasi- Amroha- Pakbara-Moradabad (bypassing Joya Toll)	Alternate Route	36	51	1 Hr.	Alternate route is unlikely to attract project traffic due to very poor geometrics and high congestion
	Atrasi- Joya- Palkbara-Moradabad	Project Road	220	50	28 Min	

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. Further, it may be noted that since the project highway has already been commissioned and has a tolling history, the current traffic traversing the project corridor already factors in traffic diversion (if any) that may have taken place.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Hapur–Moradabad section of NH-9has been done taking the above factors into consideration**. "IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways"** is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways.**

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = k x Log (EI) + A

Where,

P = Number of Vehicles (Mode wise)

EI = Economic Indicator

A = Regression constant

k = Elasticity coefficient (Regression coefficient)

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across the state of Rajasthan. Toll plazas at Garh and Joya are in the state of Uttar Pradesh. For elasticity calculations, working data from Uttar Pradesh, Delhi and Haryana has been analyzed since Delhi and Haryana have substantial impact on project traffic.

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Maharashtra State.

Table 5-1 : Per Capita Income Vs Car Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	32002	1108100	4.51	6.04		
2013	32908	1205374	4.52	6.08	3%	
2014	34044	1423020	4.53	6.15	3%	
2015	34583	1572217	4.54	6.20	2%	

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2016	36973	1746117	4.57	6.24	7%	
2017	40641	2027972	4.61	6.31	10%	4.94%

Regression analysis of same is given in figure below.

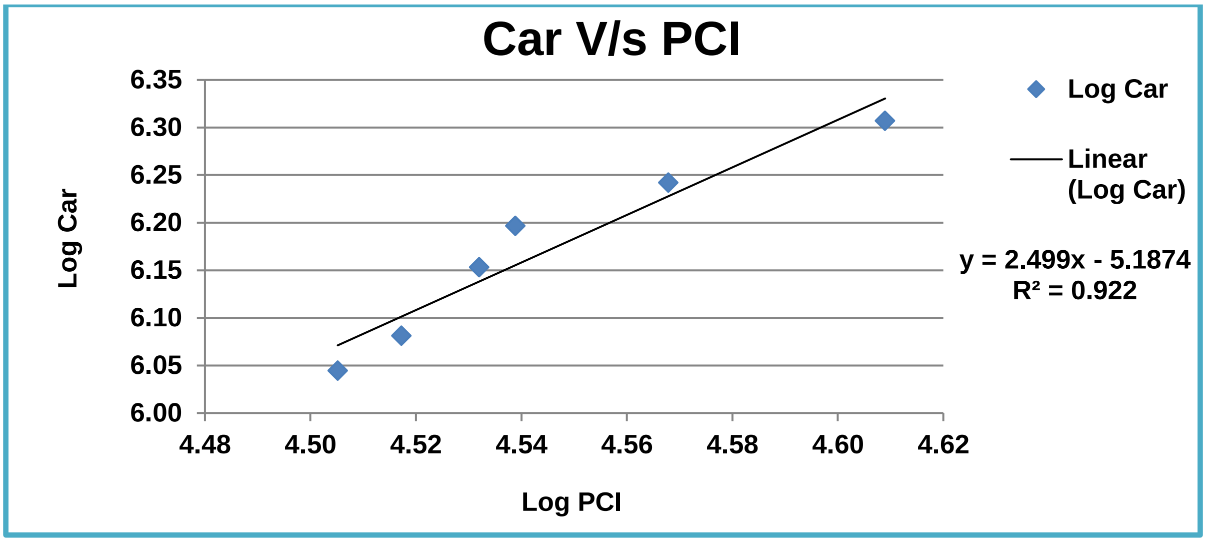

Figure 5-1: Regression and Elasticity PCI vs. Car–Extrapolation Uttar Pradesh

Table 5-2 : Population Vs Bus Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	199812341	57901	8.30	4.76		
2013	203382046	64147	8.31	4.81	2%	
2014	206942855	74389	8.32	4.87	2%	
2015	210493544	80460	8.32	4.91	2%	
2016	214032922	89127	8.33	4.95	2%	
2017	217559836	112020	8.34	5.05	2%	1.72%

Regression analysis of same is given in figure below.

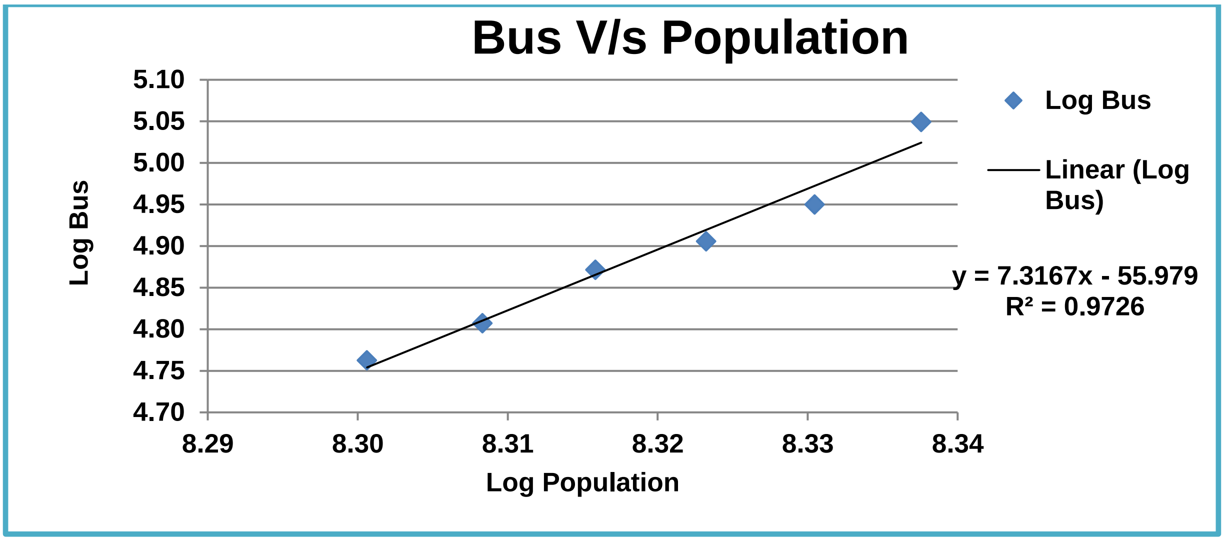

Figure 5-2: Regression and Elasticity Population vs. Bus – Extrapolation Uttar Pradesh

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Uttar Pradesh

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	645132	176164	5.81	5.25		
2013	673552	213657	5.83	5.33	4%	
2014	707469	265025	5.85	5.42	5%	
2015	729686	294022	5.86	5.47	3%	
2016	792049	316815	5.90	5.50	9%	5.28%

The following figure depicts regression analysis and extrapolation.

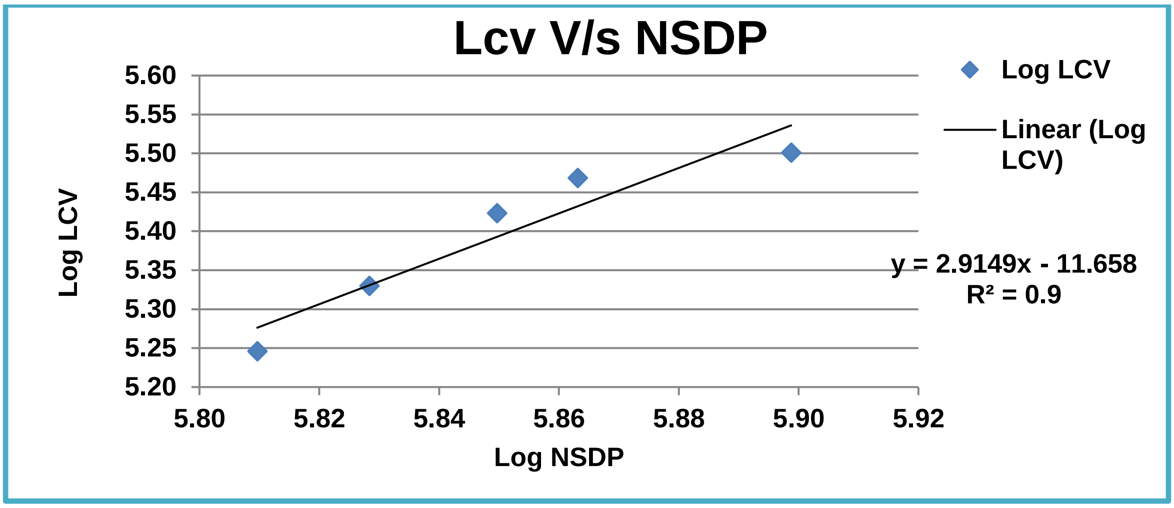

Figure 5-3: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Uttar Pradesh

Table 5-4: Trucks Traffic Vs NSDP Uttar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	645132	162813	5.81	5.21		
2013	673552	186404	5.83	5.27	4%	
2014	707469	202761	5.85	5.31	5%	
2015	729686	217609	5.86	5.34	3%	
2016	792049	245688	5.90	5.39	9%	
2017	883962	265167	5.95	5.42	12%	6.55%

The following figure depicts regression analysis and extrapolation.

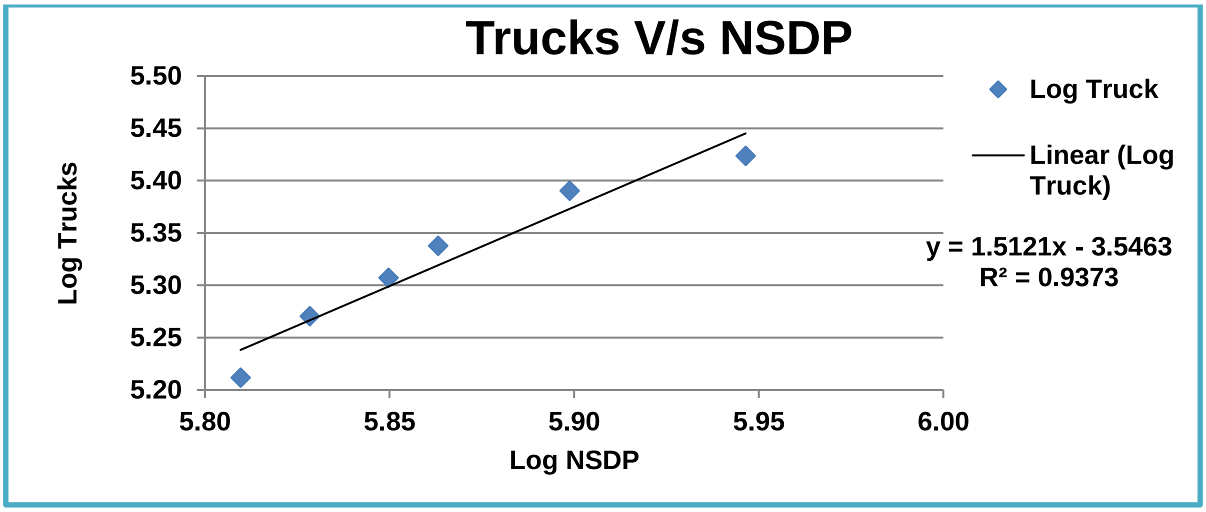

Figure 5-4: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Uttar Pradesh

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-4 : Summary Regression Analysis Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Uttar Pradesh	Car/Jeep	PCI	y = 2.499x + -5.1874	R² = 0.922	2.4990	4.94%	12.34%
	Bus	Population	y = 7.3167x - - 55.9791	R² = 0.9726	7.3167	1.72%	12.56%
	LCV	NSDP	y = 2.9149x - - 11.6585	R² = 0.9	2.9149	5.28%	15.40%
	Truck	NSDP	y = 1.5121x - - 3.5463	R² = 0.9373	1.5121	6.55%	9.90%

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Delhi State.

Table 5-5 : Per Capita Income Vs Car Delhi

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	185361	2172069	5.27	6.34		
2013	193175	2416974	5.29	6.38	4%	
2014	202216	2568380	5.31	6.41	5%	
2015	215726	2730071	5.33	6.44	7%	
2016	235737	2986579	5.37	6.48	9%	
2017	247255	3061817	5.39	6.49	5%	5.95%

Regression analysis of same is given in figure below.

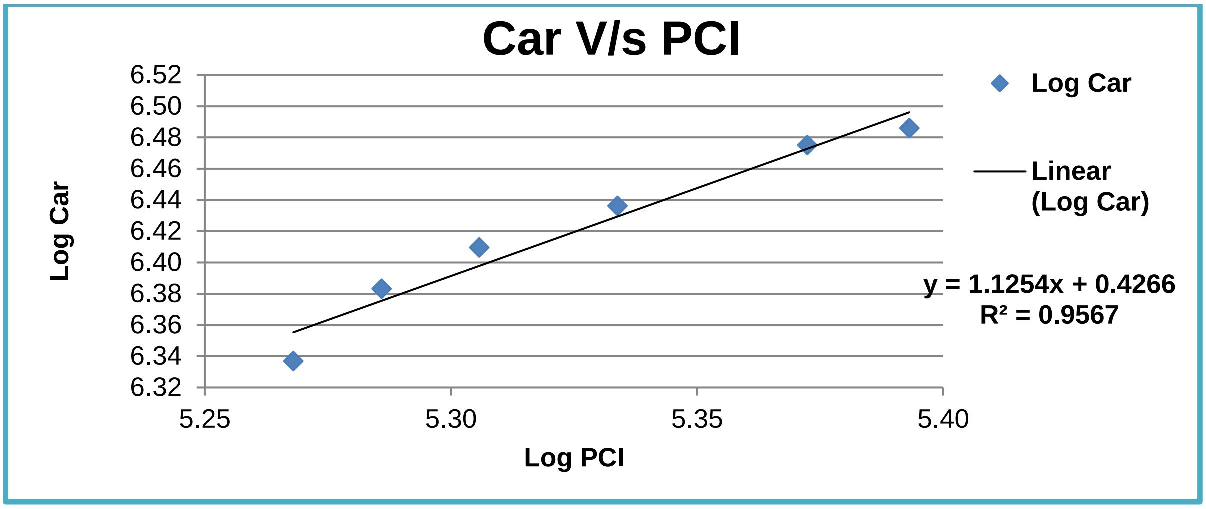

Figure 5-5: Regression and Elasticity PCI vs. Car–Extrapolation Delhi

Table 5-6 : Population Vs Bus Delhi

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	16787941	109790	7.22	5.04		
2013	17071599	19917	7.23	4.30	2%	
2014	17354281	19595	7.24	4.29	2%	
2015	17635897	19700	7.25	4.29	2%	
2016	17916359	43723	7.25	4.64	2%	
2017	18195583	41686	7.26	4.62	2%	1.62%

Regression analysis of same is given in figure below.

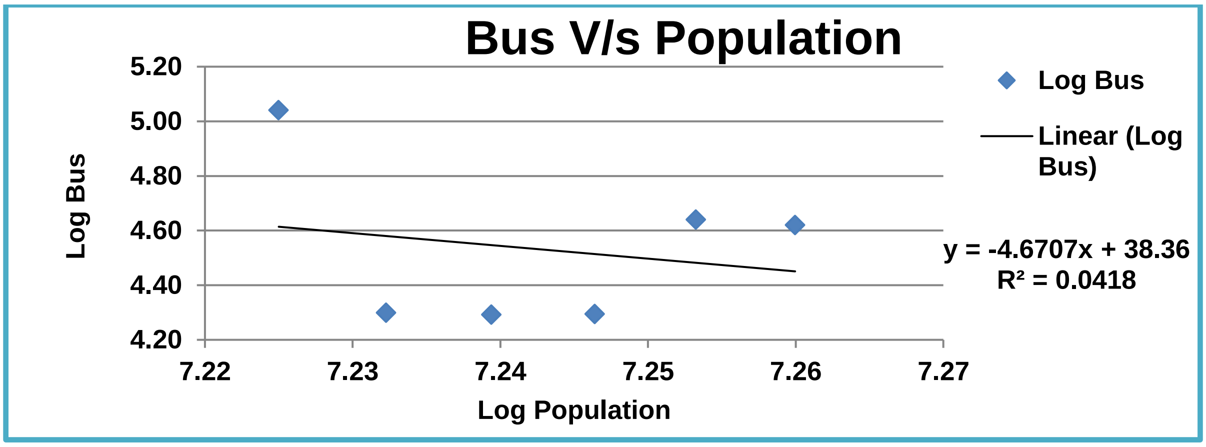

Figure 5-6: Regression and Elasticity Population vs. Bus – Extrapolation Delhi

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-7 : LCV Traffic Vs NSDP Delhi

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	314650	124547	5.50	5.10		
2013	334193	126539	5.52	5.10	6%	
2014	356528	136110	5.55	5.13	7%	
2015	387639	145903	5.59	5.16	9%	
2016	431730	183486	5.64	5.26	11%	
2017	461476	221068	5.66	5.34	7%	7.98%

The following figure depicts regression analysis and extrapolation.

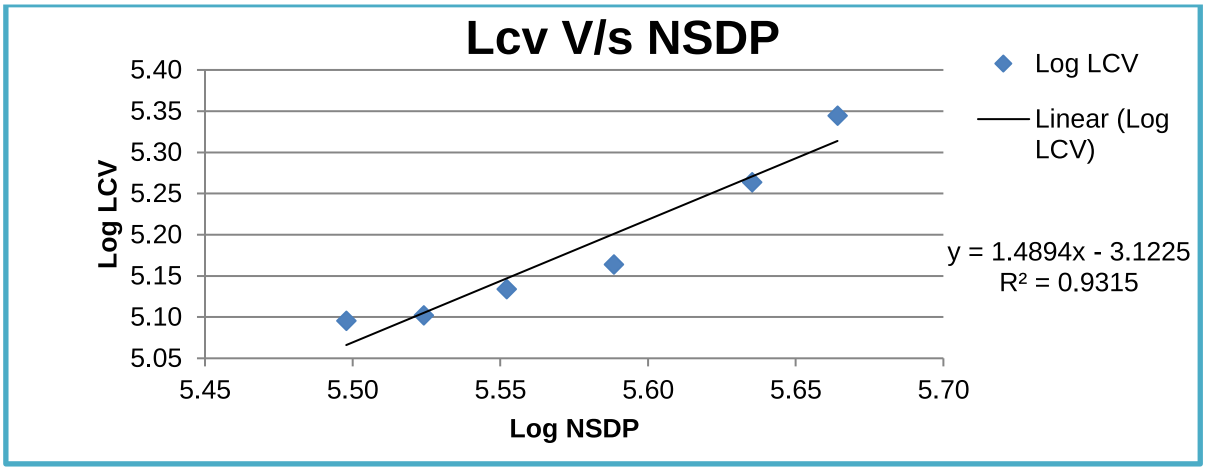

Figure 5-7: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Delhi

Table 5-4: Trucks Traffic Vs NSDP Delhi

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	314650	4792	5.50	3.68		
2013	334193	5176	5.52	3.71	6%	
2014	356528	6093	5.55	3.78	7%	
2015	387639	7503	5.59	3.88	9%	
2016	431730	8703	5.64	3.94	11%	
2017	461476	10440	5.66	4.02	7%	7.98%

The following figure depicts regression analysis and extrapolation.

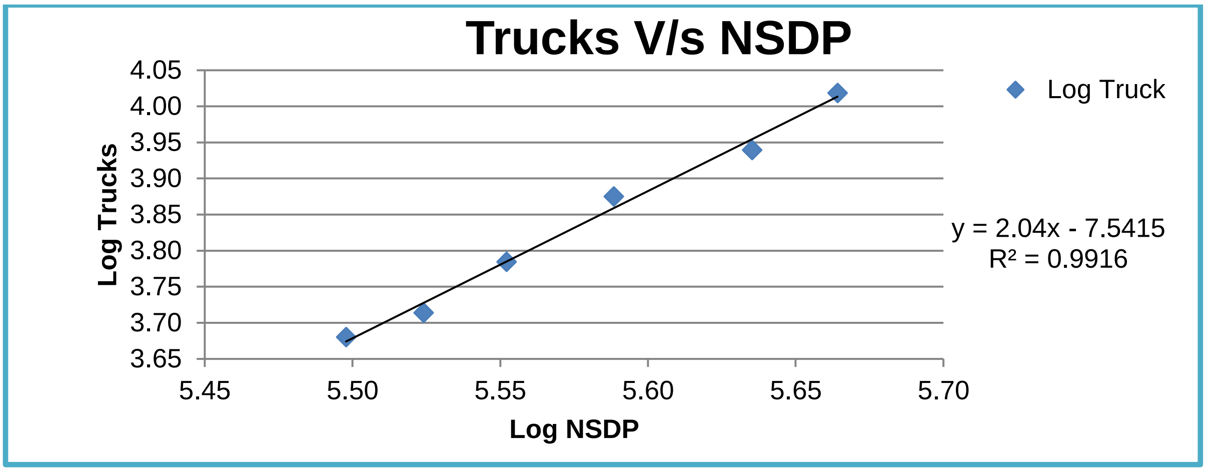

Figure 5-8: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Delhi

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-8 : Summary Regression Analysis Delhi

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Delhi	Car/Jeep	PCI	y = 1.1254x + 0.4266	R^2 = 0.9567	1.1254	5.95%	6.69%
	Bus	Population	y = -4.6707x - 38.36	R^2 = 0.0418	-4.6707	1.62%	-7.58%
	LCV	NSDP	y = 1.4894x - -3.1225	R^2 = 0.9315	1.4894	7.98%	11.88%
	Truck	NSDP	y = 2.04x - -7.5415	R^2 = 0.9916	2.0400	7.98%	16.27%

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Haryana State.

Table 5-9 : Per Capita Income Vs Car Haryana

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	106085	1134514	5.03	6.05		
2013	111780	1293065	5.05	6.11	5%	
2014	119791	1454182	5.08	6.16	7%	
2015	125032	1609544	5.10	6.21	4%	
2016	137818	1764448	5.14	6.25	10%	
2017	150241	1879587	5.18	6.27	9%	7.23%

Regression analysis of same is given in figure below.

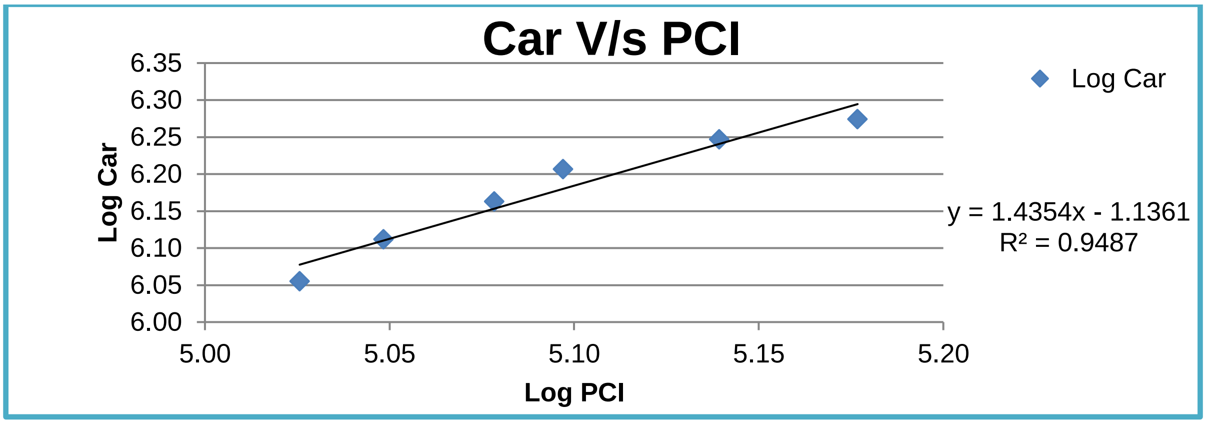

Figure 5-9: Regression and Elasticity PCI vs. Car–Extrapolation Haryana

Table 5-10 : Population Vs Bus Haryana

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	25351462	39153	7.40	4.59		
2013	25751257	43456	7.41	4.64	2%	
2014	26149236	46558	7.42	4.67	2%	
2015	26545282	52640	7.42	4.72	2%	
2016	26939286	55781	7.43	4.75	1%	
2017	27331141	60129	7.44	4.78	1%	1.52%

Regression analysis of same is given in figure below.

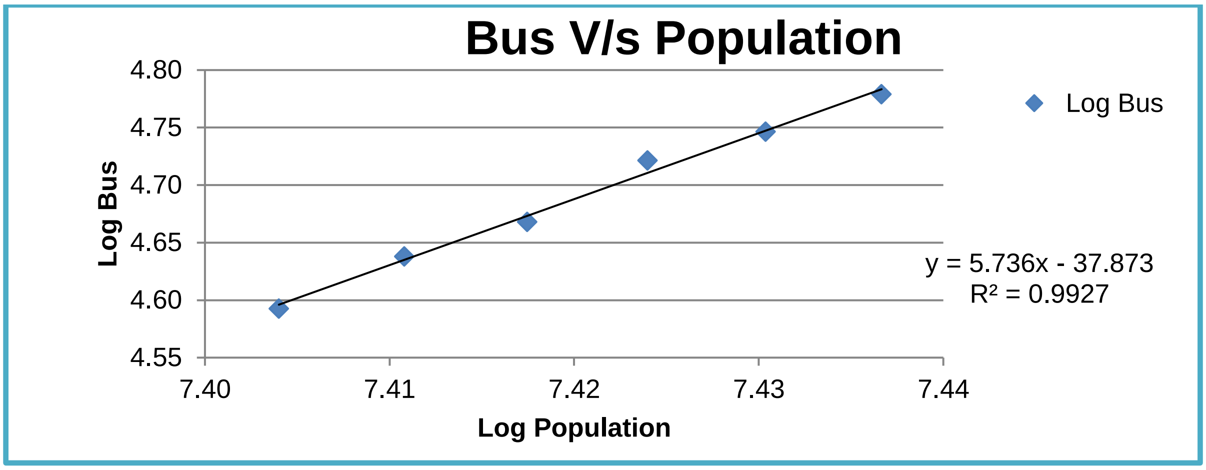

Figure 5-10: Regression and Elasticity Population vs. Bus – Extrapolation Haryana

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-11 : LCV Traffic Vs NSDP Haryana

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	271152	124897	5.43	5.10		
2013	289756	137511	5.46	5.14	7%	
2014	314931	152069	5.50	5.18	9%	
2015	333359	167901	5.52	5.23	6%	
2016	372659	182776	5.57	5.26	12%	8.30%

The following figure depicts regression analysis and extrapolation.

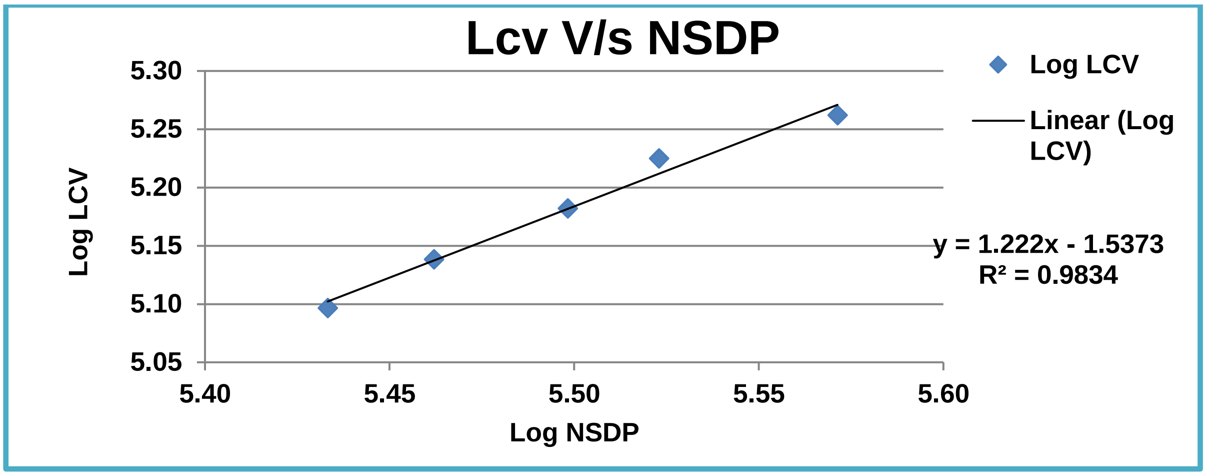

Figure 5-11: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Haryana

Table 5-4: Trucks Traffic Vs NSDP Haryana

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	271152	292735	5.43	5.47		
2013	289756	307509	5.46	5.49	7%	
2014	314931	327882	5.50	5.52	9%	
2015	333359	348732	5.52	5.54	6%	
2016	372659	367730	5.57	5.57	12%	
2017	412006	390321	5.61	5.59	11%	8.75%

The following figure depicts regression analysis and extrapolation.

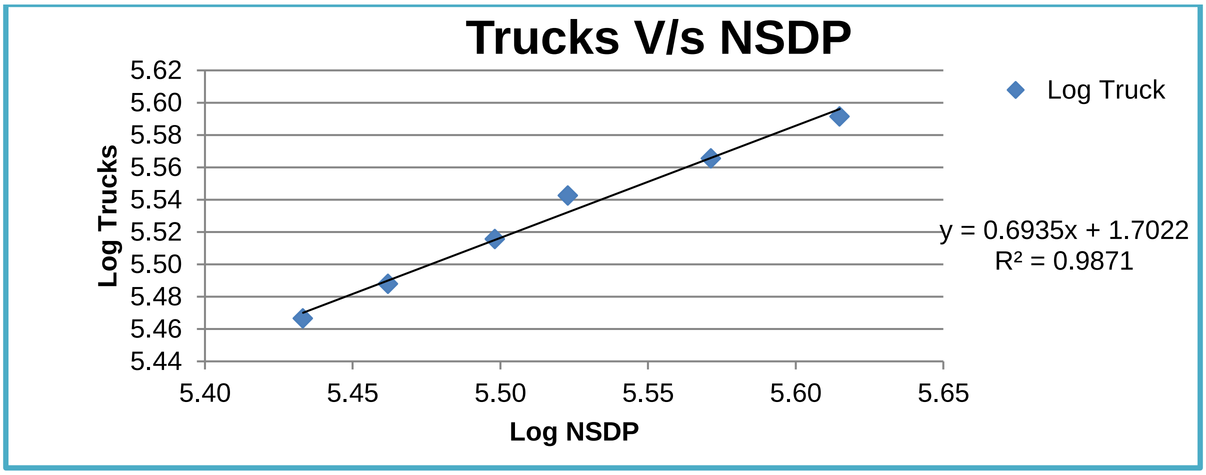

Figure 5-12: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Haryana

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for the good fit regression as reflected by R2 values are presented in the Table below.

Table 5-13: Summary Regression Analysis Haryana

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Haryana	Car/Jeep	PCI	y = 1.4354x - - 1.1361	R^2 = 0.9487	1.4354	7.23%	10.38%
	Bus	Population	y = 5.736x - -37.8732	R^2 = 0.9927	5.7360	1.52%	8.69%
	LCV	NSDP	y = 1.222x - -1.5373	R^2 = 0.9834	1.2220	8.30%	10.14%
	Truck	NSDP	y = 0.6935x - 1.7022	R^2 = 0.9871	0.6935	8.75%	6.07%

The economic model for predicting growth is a good tool, however other local, regional, and national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trends of growth. Project stretch of Hapur to Moradabad is under tolling operation with current concessionaire and has less than a year of tolling history from May 2019. Traffic data for the last two years is affected by COVID-19 impact. Hence sufficient data points are not available to be able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

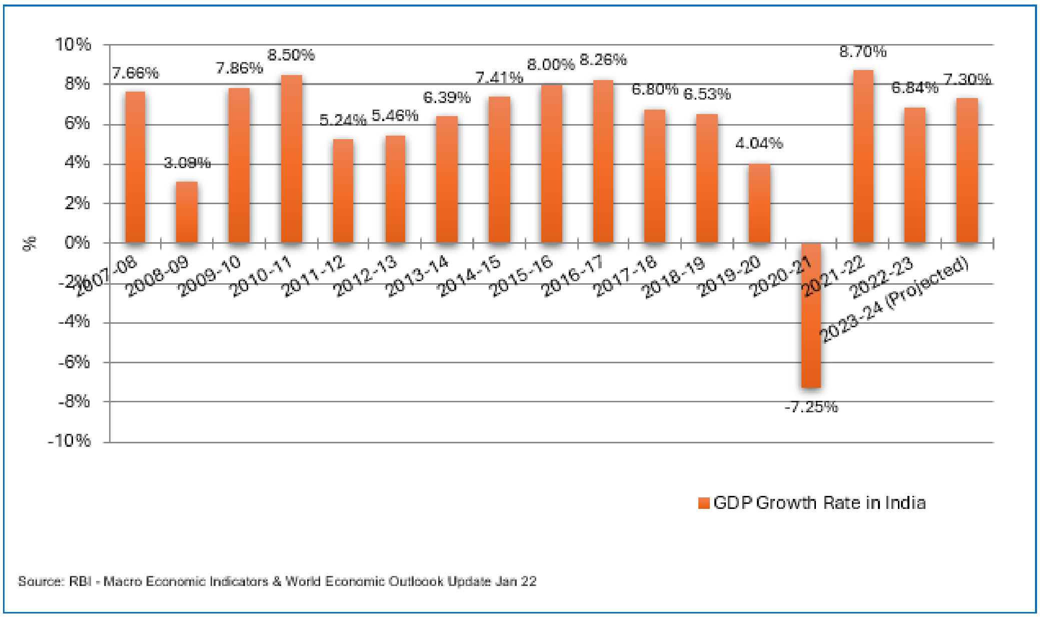

Figure 5-14: Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on Make -In- India it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. The World Economic Outlook update also has predicted a growth rate of about 7.5 % in the year 2022-23.

5.6 Developments along and around the Project Corridor & State

Though growth of Uttar Pradesh has been consistently below the national average economic growth, it is the largest state in terms of population and consumption driven demand for goods and services will remain significantly high. The rate of growth of NSDP also seems to be catching up with the national average over the years. Other regions in the influenced area states, namely Delhi, Haryana and Uttarakhand are all growing significantly faster than the national average. Considering the scenario, it may be assumed that the traffic growth on the project highway would remain high and there are minimal risks in terms of growth.

The corridor passes through heavily cultivated Gangetic plains and also connects the fertile Doaba regions of the Uttarakhand plains. Simbaoli, one of the largest and most modern sugar refinery complexes falls right on the project corridor. Sugar refineries like this link agriculture, distillery, clean fuel technologies, green energy generation including cogeneration etc. which is a positive influence on this agriculturally right region. Other parts of the capital region of Delhi are also experiencing rapid urbanization fueled by industrialization and growth. Thus, induced traffic from these developments around the project corridor and due to the improved facility will be a positive contributing factor to the traffic growth on the project corridor.

5.6.1 Industrial Units along Project Corridor

This project section of the NH-24 (newNH-9) crosses three districts of Uttar Pradesh (Hapur, Amroha and Moradabad). There are about 1000 significant industrial units in these districts out of which there are 40 large Scale and 11 Medium Scale industries. The major industrial base is dependent on agriculture and timber in the surrounding region. Being a sugarcane growing region, there are a number of sugar mills in the project catchment. Simbhawli Sugarmill is one of the largest integrated refineries producing gsugar, ethanol and other related products. The following map shows some of major industrial establishments along and in influence area of project stretch.

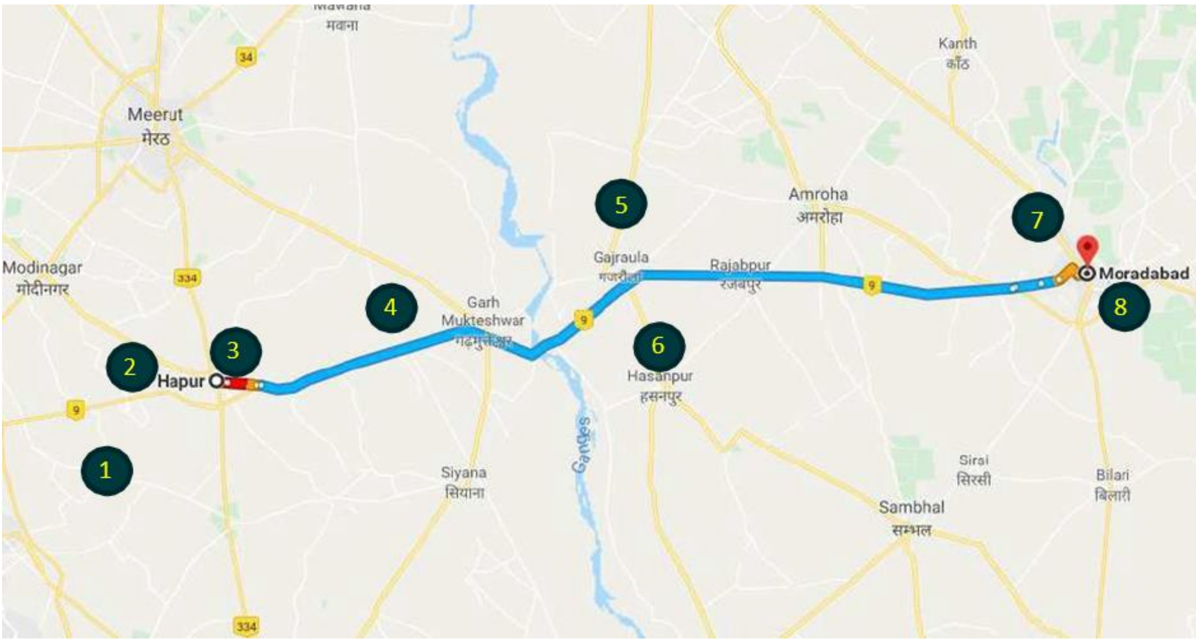

Figure 5-15: Industrial Units along project corridor

Industries shown in the above map are listed below.

1. **Dhaolana** (Chetak enterprises, Spooner Industries Pvt. Ltd., Astech build product India Pvt. ltd.,
2. **Jindal Nagar, Hapur** (Marino Industries Jindal Nagar Hapur)– Large Scale Industry of Laminated Furnitures.
3. Medium Scale Industries in **Shakti Nagar, Hapur**
4. Sugar Mills (**Simbhawali** Sugar mills)
5. **GajraulaIndustrialArea1&2**(Paper & Sugar Mills, Food Products, Organic food Products)
6. Trivani Engineering & Industries Ltd., **Hasanpur** (Engineering Goods)
7. **Agwanpur** (Industries of Milk Powder, Ghee, Acrylic Fibre, Crystal Sugar, Craft Paper)
8. **Dalpatpur** (Moradabad Dugdh Utpadan Sahakari Sangh– Milk & Milk Products)

Rapid expansion of NCR and NOIDA has triggered growth along the project corridor as well. Large number of residential projects can be seen coming up along project road near Hapur, Gajraula and Moradabad. In fact, there is a new city “New Moradabad” has come up near Pakbara on Delhi Road.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as below. The rate of growth is moderate in light of overall regional trends. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, the rate of growth diminishes. The same growth rate is not sustainable for long It is established practice to stepdown future growth rates at suitable interval of years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic and Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-12 : Recommended Growth Rates Optimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046
Car/Jeep/Van	6.23%	6.01%	5.78%	4.36%	4.17%
LCV	3.26%	3.06%	2.47%	1.76%	1.57%
Bus	3.33%	3.20%	3.44%	2.73%	2.62%
2- Axle	3.81%	3.61%	3.17%	1.76%	1.57%
3 - Axle	3.81%	3.61%	3.17%	1.76%	1.57%
4 to 6 Axle	4.14%	3.92%	3.43%	1.89%	1.68%
7 and Above Axle	4.14%	3.92%	3.43%	1.89%	1.68%

Table 5-13 : Recommended Growth Rates Pessimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046
Car/Jeep/Van	5.73%	5.51%	5.28%	3.86%	3.67%
LCV	2.76%	2.56%	1.97%	1.26%	1.07%
Bus	2.83%	2.70%	2.94%	2.23%	2.12%
2- Axle	3.31%	3.11%	2.67%	1.26%	1.07%
3 - Axle	3.31%	3.11%	2.67%	1.26%	1.07%
4 to 6 Axle	3.64%	3.42%	2.93%	1.39%	1.18%
7 and Above Axle	3.64%	3.42%	2.93%	1.39%	1.18%

Table 5-14 : Recommended Growth Rates Most Likely

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046
Car/Jeep/Van	5.98%	5.76%	5.53%	4.11%	3.92%
LCV	3.01%	2.81%	2.22%	1.51%	1.32%
Bus	3.08%	2.95%	3.19%	2.48%	2.37%
2- Axle	3.56%	3.36%	2.92%	1.51%	1.32%
3 - Axle	3.56%	3.36%	2.92%	1.51%	1.32%
4 to 6 Axle	3.89%	3.67%	3.18%	1.64%	1.43%
7 and Above Axle	3.89%	3.67%	3.18%	1.64%	1.43%

Traffic and revenue have been worked out on the basis of the above growths and some are presented in subsequent chapters of report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Garh @90.661 KM (Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	27330	1743	2303	2036	1075	2191	7	36686	56079
2024-25	29032	1799	2380	2114	1117	2281	7	38730	58860
2025-26	30778	1854	2456	2190	1157	2370	7	40812	61665
2026-27	32629	1911	2534	2269	1199	2463	7	43012	64617
2027-28	34591	1970	2615	2351	1242	2559	7	45335	67717
2028-29	36671	2030	2699	2435	1286	2659	7	47787	70973
2029-30	38876	2092	2785	2523	1333	2763	7	50379	74402
2030-31	41122	2144	2881	2602	1375	2858	7	52989	77805
2031-32	43498	2197	2980	2684	1418	2957	7	55741	81378
2032-33	46012	2251	3083	2769	1463	3058	7	58643	85126
2033-34	48672	2306	3189	2857	1510	3163	7	61704	89064
2034-35	51485	2363	3299	2948	1558	3272	7	64932	93200
2035-36	53731	2404	3389	3000	1585	3333	7	67449	96289
2036-37	56075	2447	3481	3053	1613	3396	7	70072	99500
2037-38	58522	2490	3577	3106	1641	3460	7	72803	102831
2038-39	61076	2534	3675	3161	1670	3525	7	75648	106289
2039-40	63741	2579	3775	3216	1699	3592	7	78609	109875
2040-41	66401	2620	3874	3266	1726	3652	7	81546	113395
2041-42	69172	2661	3975	3317	1753	3713	7	84598	117039
2042-43	72059	2702	4079	3369	1780	3776	7	87772	120820
2043-44	75066	2745	4186	3422	1808	3840	7	91074	124743
2044-45	78198	2788	4296	3476	1836	3904	7	94505	128804

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Joya @123.875 KM (Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	18696	1191	2008	1628	936	2017	6	26481	43300
2024-25	19861	1229	2074	1690	971	2101	5	27931	45387
2025-26	21055	1267	2140	1750	1006	2183	5	29406	47490
2026-27	22320	1305	2208	1813	1042	2268	5	30961	49695
2027-28	23661	1345	2279	1878	1079	2357	5	32604	52016
2028-29	25083	1385	2352	1946	1118	2449	5	34338	54452
2029-30	26591	1427	2427	2016	1158	2545	5	36169	57010
2030-31	28127	1462	2510	2080	1194	2633	5	38011	59543
2031-32	29751	1498	2596	2146	1231	2723	5	39950	62193
2032-33	31469	1535	2686	2214	1270	2816	5	41995	64976
2033-34	33287	1573	2778	2284	1310	2913	5	44150	67894
2034-35	35210	1611	2874	2357	1351	3013	5	46421	70954
2035-36	36746	1640	2952	2398	1374	3070	5	48185	73216
2036-37	38349	1669	3033	2441	1398	3128	5	50023	75567
2037-38	40021	1698	3116	2484	1423	3187	5	51934	78001
2038-39	41766	1727	3201	2528	1448	3247	5	53922	80522
2039-40	43588	1758	3288	2572	1474	3308	5	55993	83136
2040-41	45406	1785	3374	2613	1497	3364	5	58044	85696
2041-42	47300	1813	3462	2654	1520	3421	5	60175	88345
2042-43	49273	1842	3553	2695	1543	3478	5	62389	91083
2043-44	51328	1871	3646	2738	1567	3537	5	64692	93927
2044-45	53469	1900	3742	2781	1592	3597	5	67086	96873

Table 6-3 : Total Tollable Traffic @ Toll Plaza 1- Garh @ 90.661 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	27330	1743	2303	2036	1075	2191	7	36686	56079
2024-25	28894	1791	2368	2104	1111	2271	7	38546	58581
2025-26	30487	1837	2432	2169	1145	2348	7	40425	61078
2026-27	32168	1884	2497	2236	1181	2428	7	42401	63694
2027-28	33942	1932	2565	2305	1218	2511	7	44480	66435
2028-29	35814	1982	2634	2377	1256	2596	7	46666	69302
2029-30	37789	2032	2705	2451	1295	2685	7	48964	72304
2030-31	39783	2072	2784	2516	1329	2764	7	51255	75248
2031-32	41883	2113	2866	2583	1365	2845	7	53662	78329
2032-33	44094	2154	2950	2652	1402	2929	7	56188	81549
2033-34	46421	2197	3036	2723	1439	3014	7	58837	84905
2034-35	48872	2240	3126	2795	1477	3102	7	61619	88417
2035-36	50760	2268	3196	2830	1495	3145	7	63701	90909
2036-37	52721	2297	3267	2866	1513	3189	7	65860	93487
2037-38	54758	2326	3340	2902	1533	3233	7	68099	96152

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2038-39	56873	2355	3415	2938	1553	3278	7	70419	98906
2039-40	59070	2385	3491	2976	1573	3323	7	72825	101753
2040-41	61240	2410	3566	3008	1590	3362	7	75183	104508
2041-42	63489	2435	3642	3041	1607	3402	7	77623	107352
2042-43	65820	2461	3719	3074	1624	3442	7	80147	110283
2043-44	68236	2488	3798	3107	1641	3483	7	82760	113311
2044-45	70742	2515	3878	3140	1658	3524	7	85464	116432

Table 6-4 : Total Tollable Traffic @ Toll Plaza 2- Joya @123.875 KM

(Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	18696	1191	2008	1628	936	2017	6	26481	43300
2024-25	19768	1223	2064	1681	967	2091	5	27799	45171
2025-26	20857	1254	2120	1733	997	2163	5	29129	47044
2026-27	22006	1286	2177	1787	1027	2237	5	30525	48997
2027-28	23219	1319	2235	1842	1059	2313	5	31992	51037
2028-29	24499	1352	2296	1899	1092	2392	5	33535	53175
2029-30	25849	1387	2358	1958	1126	2473	5	35156	55407
2030-31	27213	1414	2428	2010	1156	2546	5	36772	57596
2031-32	28648	1442	2499	2064	1186	2621	5	38465	59875
2032-33	30160	1471	2572	2119	1218	2698	5	40243	62257
2033-34	31752	1500	2648	2176	1251	2777	5	42109	64746
2034-35	33428	1529	2726	2234	1285	2858	5	44065	67340
2035-36	34719	1549	2787	2262	1301	2898	5	45521	69156
2036-37	36060	1569	2849	2291	1317	2938	5	47029	71028
2037-38	37453	1589	2912	2320	1333	2979	5	48591	72960
2038-39	38899	1609	2977	2349	1349	3020	5	50208	74950
2039-40	40401	1629	3044	2379	1366	3061	5	51885	77009
2040-41	41884	1647	3109	2404	1381	3097	5	53527	78996
2041-42	43422	1665	3175	2430	1396	3133	5	55226	81044
2042-43	45016	1683	3242	2456	1411	3170	5	56983	83155
2043-44	46669	1701	3310	2483	1426	3207	5	58801	85332
2044-45	48383	1719	3380	2510	1441	3244	5	60682	87575

Traffic projections for Most Likely scenario is given as under

Table 6-5 : Total Tollable Traffic @ Toll Plaza 1- Garh @ 90.661 KM
(Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	27330	1743	2303	2036	1075	2191	7	36686	56079
2024-25	28963	1796	2374	2109	1114	2276	7	38639	58722
2025-26	30633	1846	2444	2180	1151	2360	7	40621	61379
2026-27	32399	1898	2516	2253	1189	2447	7	42709	64163
2027-28	34266	1951	2591	2329	1228	2536	7	44908	67080

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2028-29	36241	2006	2667	2407	1270	2629	7	47227	70144
2029-30	38329	2063	2745	2488	1313	2725	7	49670	73356
2030-31	40448	2109	2832	2560	1351	2812	7	52119	76526
2031-32	42684	2156	2923	2634	1390	2901	7	54695	79845
2032-33	45044	2204	3016	2711	1430	2993	7	57405	83321
2033-34	47535	2252	3113	2790	1472	3088	7	60257	86966
2034-35	50163	2302	3212	2871	1515	3187	7	63257	90783
2035-36	52226	2336	3291	2914	1538	3239	7	65551	93566
2036-37	54374	2371	3373	2958	1561	3292	7	67936	96452
2037-38	56610	2407	3457	3003	1584	3345	7	70413	99437
2038-39	58938	2443	3543	3048	1608	3400	7	72987	102531
2039-40	61361	2480	3632	3094	1632	3456	7	75662	105739
2040-41	63768	2512	3718	3135	1654	3505	7	78299	108861
2041-42	66270	2546	3807	3176	1676	3556	7	81038	112100
2042-43	68870	2580	3897	3218	1698	3607	7	83877	115442
2043-44	71572	2614	3989	3261	1720	3659	7	86822	118900
2044-45	74379	2648	4083	3304	1743	3711	7	89875	122472

Table 6-6 : Total Tollable Traffic @ Toll Plaza 2- Joya @123.875 KM

(Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	18696	1191	2008	1628	936	2017	6	26481	43300
2024-25	19815	1227	2069	1686	969	2096	5	27867	45282
2025-26	20956	1261	2130	1743	1002	2173	5	29270	47274
2026-27	22163	1296	2193	1802	1036	2253	5	30748	49361
2027-28	23439	1332	2257	1862	1071	2336	5	32302	51542
2028-29	24789	1369	2324	1924	1107	2421	5	33939	53825
2029-30	26216	1407	2392	1989	1144	2510	5	35663	56219
2030-31	27664	1438	2468	2047	1178	2590	5	37390	58578
2031-32	29193	1469	2546	2107	1212	2673	5	39205	61043
2032-33	30806	1502	2627	2169	1247	2758	5	41114	63622
2033-34	32509	1535	2711	2232	1283	2846	5	43121	66319
2034-35	34306	1569	2797	2297	1320	2937	5	45231	69141
2035-36	35716	1593	2867	2332	1340	2985	5	46838	71178
2036-37	37185	1617	2938	2367	1360	3034	5	48506	73281
2037-38	38714	1641	3011	2403	1381	3083	5	50238	75457
2038-39	40306	1666	3086	2439	1402	3134	5	52038	77712
2039-40	41963	1691	3163	2476	1423	3186	5	53907	80045
2040-41	43608	1713	3238	2509	1442	3231	5	55746	82307
2041-42	45318	1735	3315	2542	1461	3278	5	57654	84648
2042-43	47095	1758	3393	2575	1481	3325	5	59632	87064
2043-44	48942	1781	3474	2610	1501	3373	5	61686	89570
2044-45	50861	1805	3556	2645	1521	3421	5	63814	92152

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Hapur-Moradabad project, the Target Date and Target Traffic are defined as under:

Target Date - 1st April 2028

Target Traffic - 67413 in PCU

It was observed that as per traffic projections, average traffic volume is in excess of target traffic in all scenarios. The probable extension of the concession period is estimated according to article 29 of the concession agreement which comes to about 2 years. Traffic forecast and revenue projections have been kept up to concession period in report till actual finalization of modification.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2028	67413	62027	-8%	12%	12%	22	2.6

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2028	67413	62761	-7%	10%	10%	22	2.3

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2028	67413	61276	-9%	14%	14%	22	3.0

CHAPTER 7
FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Hapur-Moradabad section of NH-9 is based on the old toll policy. As per the Toll Notification (Schedule -G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued for 50 trips in month at 2/3d rate.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van I - Rs. 265 per month
    b) Local Commercial Vehicles at 50% rate for single journey

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A} - \text{WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

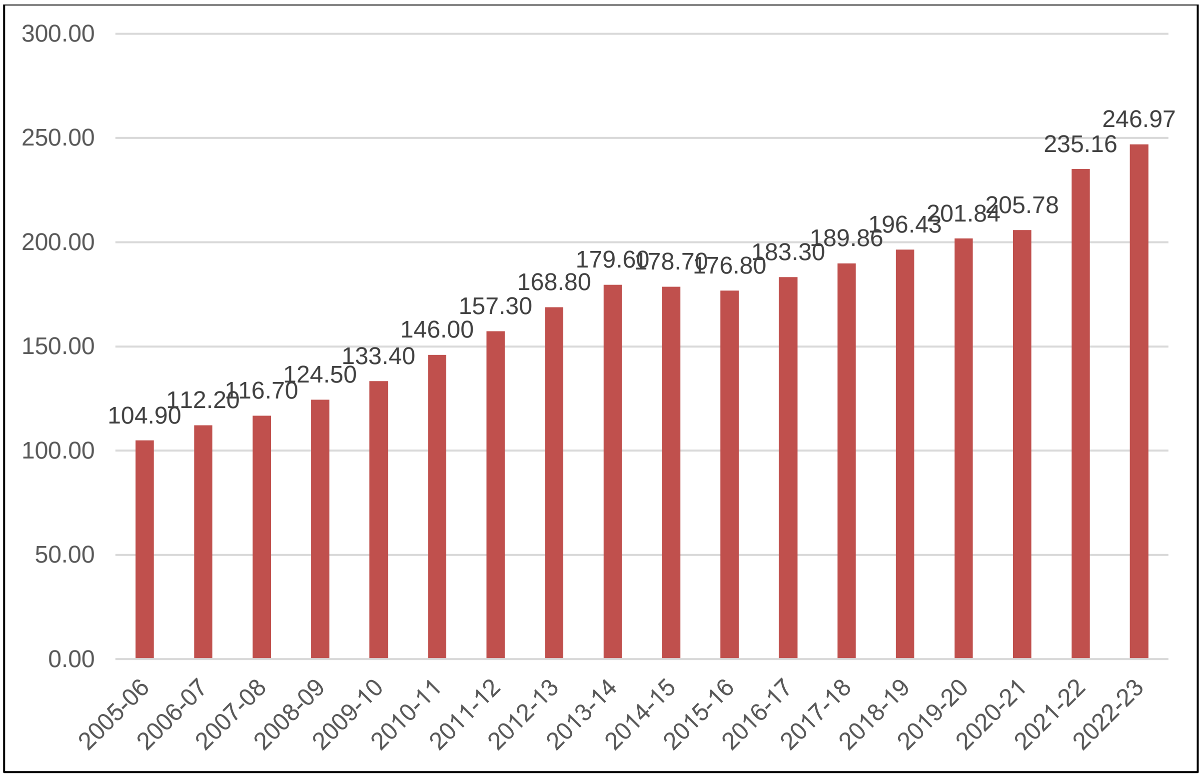

Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given below.

Table 7-2 : Toll Rates for Single Journey@ Km 90.661

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2023-24	105	170	360	360	390	565	685
2024-25	110	180	370	370	405	580	705
2025-26	120	190	395	395	430	615	750
2026-27	130	205	425	425	460	660	800
2027-28	135	215	445	445	485	695	845
2028-29	140	225	470	470	510	730	885
2029-30	150	240	490	490	535	765	930
2030-31	155	250	515	515	565	805	980
2031-32	165	265	545	545	595	850	1030
2032-33	175	275	575	575	625	895	1085
2033-34	180	290	605	605	655	940	1145
2034-35	190	305	635	635	690	990	1205
2035-36	200	325	670	670	730	1045	1265
2036-37	210	340	705	705	765	1100	1335
2037-38	225	360	740	740	805	1155	1405
2038-39	235	380	780	780	850	1220	1480
2039-40	250	400	825	825	895	1285	1560
2040-41	260	420	865	865	945	1355	1645
2041-42	275	440	915	915	995	1425	1735
2042-43	290	465	965	965	1050	1505	1830
2043-44	305	490	1015	1015	1110	1585	1930
2044-45	320	520	1070	1070	1170	1675	2035

Table 7 3: Toll Rates for Single Journey @ Km 123.875

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2023-24	70	110	230	230	250	360	440
2024-25	70	115	235	235	260	370	450
2025-26	75	120	250	250	270	390	475
2026-27	75	125	260	260	285	410	500
2027-28	80	130	275	275	300	430	525
2028-29	85	135	290	290	315	450	550

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2029-30	90	145	305	305	330	475	580
2030-31	95	150	320	320	345	500	610
2031-32	100	160	335	335	365	525	640
2032-33	105	170	350	350	385	550	670
2033-34	110	175	370	370	405	580	705
2034-35	115	185	390	390	425	610	745
2035-36	120	195	410	410	450	645	785
2036-37	130	205	430	430	470	675	825
2037-38	135	215	455	455	495	715	870
2038-39	140	230	480	480	525	750	915
2039-40	150	240	505	505	550	790	965
2040-41	155	255	530	530	580	835	1015
2041-42	165	265	560	560	610	880	1070
2042-43	175	280	590	590	645	925	1130
2043-44	185	295	625	625	680	975	1190
2044-45	195	315	655	655	715	1030	1255

Table 7-3 : Toll Rates for Return Journey @ Km 90.661

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2023-24	160	260	540	540	590	845	1030
2024-25	165	265	555	555	605	870	1060
2025-26	180	290	595	595	645	925	1125
2026-27	190	310	635	635	690	990	1205
2027-28	200	325	665	665	725	1040	1265
2028-29	210	340	700	700	765	1095	1330
2029-30	225	360	740	740	805	1150	1400
2030-31	235	375	775	775	845	1210	1470
2031-32	245	395	815	815	890	1275	1550
2032-33	260	415	860	860	935	1340	1630
2033-34	275	440	905	905	985	1410	1715
2034-35	285	460	950	950	1035	1485	1805
2035-36	300	485	1000	1000	1090	1565	1900
2036-37	320	510	1055	1055	1150	1645	2000
2037-38	335	540	1110	1110	1210	1735	2110
2038-39	355	565	1170	1170	1275	1830	2220
2039-40	370	595	1235	1235	1345	1925	2340
2040-41	390	630	1300	1300	1415	2030	2470
2041-42	415	665	1370	1370	1495	2140	2605
2042-43	435	700	1445	1445	1575	2255	2745
2043-44	460	735	1525	1525	1660	2380	2895
2044-45	485	775	1610	1610	1750	2510	3055

Table 7-4 : Toll Rates for Return Journey @ Km 123.875

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2023-24	100	165	345	345	375	540	660
2024-25	105	170	355	355	385	555	675
2025-26	110	180	370	370	405	585	710
2026-27	115	185	390	390	425	615	745
2027-28	120	195	410	410	450	645	785
2028-29	130	205	430	430	470	675	825
2029-30	135	215	455	455	495	710	865
2030-31	140	230	475	475	520	750	910
2031-32	150	240	500	500	550	785	960
2032-33	155	250	530	530	575	830	1010
2033-34	165	265	555	555	605	870	1060
2034-35	175	280	585	585	640	915	1115
2035-36	180	295	615	615	670	965	1175
2036-37	190	310	650	650	705	1015	1235
2037-38	200	325	680	680	745	1070	1305
2038-39	210	345	720	720	785	1125	1370
2039-40	225	360	755	755	825	1185	1445
2040-41	235	380	800	800	870	1250	1525
2041-42	250	400	840	840	915	1320	1605
2042-43	260	425	885	885	965	1390	1690
2043-44	275	445	935	935	1020	1465	1785
2044-45	290	470	985	985	1075	1545	1880

Table 7-5 : Toll Rates for Monthly Pass Local @ Km 90.661

Year	Car
2023-24	330
2024-25	330
2025-26	345
2026-27	360
2027-28	380
2028-29	400
2029-30	420
2030-31	445
2031-32	465
2032-33	490
2033-34	515
2034-35	545
2035-36	575
2036-37	605
2037-38	635
2038-39	670
2039-40	705
2040-41	745
2041-42	785

Year	Car
2042-43	830
2043-44	875
2044-45	920

Table 7-6 : Toll Rates for Monthly Pass Local @ Km 123.87

Year	Car
2023-24	330
2024-25	340
2025-26	355
2026-27	375
2027-28	390
2028-29	410
2029-30	435
2030-31	455
2031-32	480
2032-33	505
2033-34	530
2034-35	560
2035-36	585
2036-37	620
2037-38	650
2038-39	685
2039-40	720
2040-41	760
2041-42	800
2042-43	845
2043-44	890
2044-45	940

Table 7-7 : Toll Rates for Monthly Pass @ Km 90.661

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2023-24	3540	5720	11990	11990	13080	18800	22890
2024-25	3700	5935	12355	12355	13475	19335	23525
2025-26	3985	6395	13180	13180	14360	20555	24985
2026-27	4265	6840	14100	14100	15360	21990	26725
2027-28	4480	7190	14820	14820	16150	23120	28095
2028-29	4710	7555	15585	15585	16980	24310	29545
2029-30	4950	7945	16390	16390	17860	25570	31075
2030-31	5205	8355	17240	17240	18785	26895	32690
2031-32	5475	8785	18135	18135	19760	28300	34395
2032-33	5760	9245	19085	19085	20795	29780	36200
2033-34	6060	9725	20085	20085	21885	31345	38105
2034-35	6375	10235	21145	21145	23040	33000	40115
2035-36	6710	10775	22265	22265	24260	34750	42240
2036-37	7065	11345	23445	23445	25550	36600	44490

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2037-38	7440	11950	24695	24695	26915	38555	46870
2038-39	7835	12585	26020	26020	28355	40625	49385
2039-40	8255	13260	27420	27420	29880	42810	52045
2040-41	8700	13970	28900	28900	31495	45125	54860
2041-42	9170	14725	30465	30465	33200	47570	57835
2042-43	9665	15525	32120	32120	35005	50160	60985
2043-44	10190	16370	33875	33875	36920	52900	64320
2044-45	10745	17260	35730	35730	38940	55800	67845

Table 7-8 : Toll Rates for Monthly Pass @ Km 123.875

Year	Car	Minibus /LCV	Bus	Truck	3 Axle	Multi axle	Oversized Vehicles
2023-24	2270	3670	7685	7685	8385	12055	14675
2024-25	2325	3760	7875	7875	8595	12355	15040
2025-26	2445	3950	8275	8275	9025	12975	15795
2026-27	2570	4150	8695	8695	9485	13630	16595
2027-28	2700	4360	9135	9135	9965	14325	17435
2028-29	2835	4580	9600	9600	10470	15055	18325
2029-30	2980	4815	10090	10090	11010	15825	19265
2030-31	3135	5065	10610	10610	11575	16640	20255
2031-32	3295	5325	11160	11160	12170	17500	21300
2032-33	3470	5600	11735	11735	12805	18405	22405
2033-34	3650	5895	12350	12350	13470	19365	23575
2034-35	3840	6200	12995	12995	14175	20380	24810
2035-36	4040	6530	13675	13675	14920	21450	26110
2036-37	4255	6870	14400	14400	15710	22580	27490
2037-38	4480	7235	15165	15165	16540	23780	28945
2038-39	4720	7620	15970	15970	17420	25045	30490
2039-40	4970	8030	16825	16825	18355	26385	32120
2040-41	5235	8460	17725	17725	19340	27800	33840
2041-42	5520	8915	18680	18680	20380	29295	35665
2042-43	5820	9400	19690	19690	21485	30880	37595
2043-44	6135	9910	20760	20760	22650	32560	39635
2044-45	6470	10450	21895	21895	23885	34330	41795

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under **Optimistic, Pessimistic and Most Likely** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2045-46 starting from the year 2023-24 are shown in tables below.

Table 7-9 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	205.34	104.84	**310.18**
2024-25	222.06	112.29	**334.35**
2025-26	250.44	123.92	**374.36**
2026-27	280.82	134.33	**415.16**
2027-28	309.00	148.44	**457.44**
2028-29	338.20	163.80	**502.00**
2029-30	375.71	180.43	**556.14**
2030-31	410.09	197.45	**607.54**
2031-32	453.00	218.01	**671.01**
2032-33	498.96	237.82	**736.79**
2033-34	546.16	261.42	**807.58**
2034-35	598.77	287.18	**885.95**
2035-36	653.11	310.68	**963.79**
2036-37	709.60	338.63	**1048.23**
2037-38	773.44	366.46	**1139.90**
2038-39	841.17	396.36	**1237.54**
2039-40	917.89	434.79	**1352.68**
2040-41	990.69	467.48	**1458.17**
2041-42	1080.46	509.54	**1590.00**
2042-43	1173.41	552.52	**1725.93**
2043-44	1279.55	602.93	**1882.48**
2044-45	1386.60	652.95	**2039.55**

Table 7-10 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	205.34	104.84	**310.18**
2024-25	221.00	111.75	**332.75**
2025-26	248.05	122.75	**370.80**
2026-27	276.74	132.42	**409.16**
2027-28	303.04	145.58	**448.62**
2028-29	330.10	159.89	**489.99**
2029-30	365.00	175.26	**540.26**
2030-31	396.50	190.88	**587.38**
2031-32	435.89	209.73	**645.62**
2032-33	477.79	227.70	**705.49**
2033-34	520.45	249.09	**769.54**
2034-35	567.76	272.37	**840.12**
2035-36	616.22	293.23	**909.45**
2036-37	666.24	318.02	**984.27**
2037-38	722.73	342.48	**1065.21**
2038-39	782.30	368.62	**1150.92**

Year	TP-1	TP2	Total
2039-40	849.62	402.35	**1251.97**
2040-41	912.61	430.52	**1343.12**
2041-42	990.46	467.00	**1457.46**
2042-43	1070.43	503.99	**1574.42**
2043-44	1161.60	547.31	**1708.91**
2044-45	1252.72	589.86	**1842.58**

Table 7-11 : Toll Revenue Most Likely Scenario (Rs. Crores)

Year	TP-1	TP2	Total
2023-24	205.34	104.84	**310.18**
2024-25	221.55	112.01	**333.57**
2025-26	249.24	123.33	**372.57**
2026-27	278.75	133.37	**412.12**
2027-28	305.99	147.00	**452.99**
2028-29	334.13	161.84	**495.97**
2029-30	370.34	177.86	**548.21**
2030-31	403.29	194.18	**597.47**
2031-32	444.43	213.86	**658.29**
2032-33	488.36	232.73	**721.09**
2033-34	533.28	255.21	**788.49**
2034-35	583.20	279.71	**862.91**
2035-36	634.56	301.84	**936.40**
2036-37	687.76	328.15	**1015.90**
2037-38	747.80	354.26	**1102.06**
2038-39	811.29	382.27	**1193.57**
2039-40	883.21	418.28	**1301.48**
2040-41	950.92	448.65	**1399.57**
2041-42	1034.55	487.80	**1522.35**
2042-43	1120.75	527.67	**1648.42**
2043-44	1219.12	574.42	**1793.54**
2044-45	1318.00	620.54	**1938.53**

CHAPTER 8

CONCLUSION AND RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Hapur to Moradabad section of NH-9 in state of Uttar Pradesh from km 50.000 to km 148.277is currently four lane and would be augmented to six lane in current concession. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the busy and prominent national highway NH-9which is main link for traffic from Punjab, Haryana, Delhi to Moradabad, Rampur and eastern part of Uttarakhand. There are large number of townships, industrial corridors and other business establishments coming up along the project corridor. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give a positive impact to traffic flow on the project. The following can be considered as major outcomes of the study.

a) There is a good amount of tollable traffic running on the project.

b) Project corridor has potential to witness traffic growth @ 6-8% annually Post COVID-19 in near future due to various development in area and overall development of economy.

c) The Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on the above it can be considered a stable healthy project from the traffic and revenue point of view.

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IRB
INFRASTRUCTURE TRUST

GOA/KARNATAKA BORDER TO KUNDARPUR
(KM 93.300 TO KM 283.300)
SECTION OF NH-17 IN THE STATE OF
GOA & KARNATAKA

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

MARCH 2024

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under various phases of NHDP. Under Phase IV NHAI has planned to convert existing 2-lane National Highways into 4-lane National Highway.

The project under consideration, Four Laning of Goa / Karnataka Border to Kundapur section of NH-17 from km 93.300 to km 283.300 is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. M/s IRB Westcoast Tollway Ltd. (Concessionaire) has been awarded the Project for a concession period of 28 years starting from the appointed date of 3rd March 2014. The Project is under capacity augmentation to six lanes. Tolling operation under current concession has commenced in February 2020 after partial COD on 31st January 2020.Further to it additional length of 161.050 Km has been completed and put to commercial operation in February 2022. PCOD-3 has been received in March 2023 & the rest of length is expected to complete by Financial Year 2024.

Project road from Goa/ Karnataka Border (Near Karwar) to Kundapur is about 190 km section of Mumbai - Goa highway (NH-17) from Km 93.700 to Km 283.300. NH-17 is most important transportation corridor along west cost of India. It starts at Panvel, at the junction of National Highway 4 (NH 4), and ends at Kanyakumari. NH-17 mainly traverses through the west coast of India, sometimes touching the shores of the Arabian Sea. The NH 17 touches the Arabian Sea at Maravanthe in Karnataka, Thalassery, Alappuzha and Kollam in Kerala. It passes through the Indian states of Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu

The following figure shows the project road alignment.

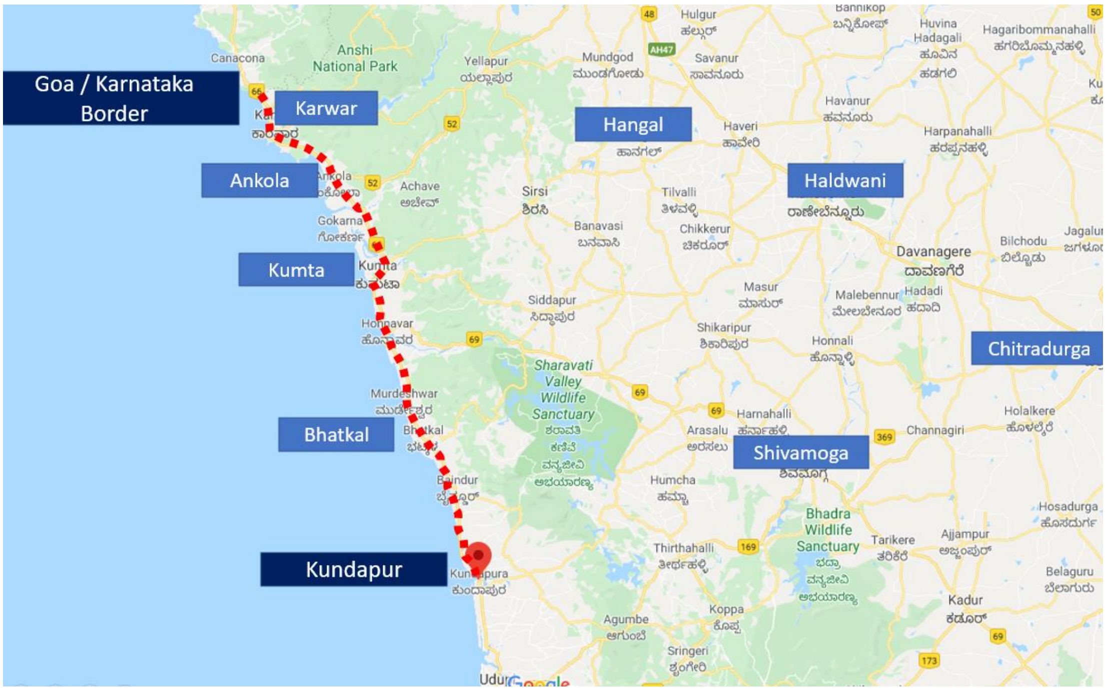


Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged GMD Consultants to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as "Traffic Study & Toll Revenue Projection Report" mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth

b) Toll Rate Growth

c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

Project of Four Laning of Goa / Karnataka Border – Kundapur section of NH-17 from Km 93.700 to Km 283.300 is Phase-IV project of NHAI on PPP basis under DBFOT pattern. Ankola, Bhatkal, Kumta and Karwar are the main urban centers on project Corridor. For most of the length of the project road runs parallel to the western coast.

It can be observed that project road forms a main connectivity between Mumbai and southern parts on west coast like Goa, Kanoor, Kocchi, Thiruanantpuram and finally Kanyakumai. Thus, transportation requirements in terms of passenger and goods are largely dependent on this spinal road.

2.2 Project Stretch Description

Project road section of NH-17 (now NH-66) passes through the important places like Karwar, Bhatkal, Ankola. This is the main connectivity between Mumbai and- Goa and Kerala. The Project Road passes through the districts of Karnataka and Goa.

National Highway 66, commonly referred to as NH 66 (Erstwhile NH-17 and a part of NH-47),is a busy National Highway that runs roughly north–south along the western coast of India, parallel to the Western Ghats. It connects Panvel (a city south of Mumbai) to Kanyakumari, passing through the states of Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu

The following are the major centers of areas which have impact on project road in terms of traffic.

Goa: Is a state in India within the coastal region known as the Konkan, in Western India. It is bounded by Maharashtra to the north and Karnataka to the east and south, with the Arabian Sea forming its Western coast. It is India's smallest state by area and the fourth smallest by population. Goa has the highest GDP per capita among all Indian states,[3] that is two and a half times that of the country. It was ranked the 'best placed State' by the "Eleventh Finance Commission" for its infrastructure and ranked on top for the 'best quality of life' in India by the National Commission on Population based on the 12 Indicators.

Kumta: Is a town and a taluk in the Uttara Kannada district of Karnataka, India. Kumta is about 142 km south of Margao and 58 km north of Bhatkal. It is situated 72.7 km from Karwar, the district headquarters. It is one of the important stations along the Konkan Railway line running between Mumbai and Mangalore.

Bhatkal: Is a port town in the Uttara Kannada District of the South Indian state of Karnataka. The town of Bhatkal lies on National Highway 66, which runs between Mumbai and Kochi, and has one of the major railway stations along the Konkan Railway line, which runs between Mumbai and Mangaluru

As the project highway runs along the west coast for most parts of its alignment, there are only radial roads connecting to the project highway which work as feeder network to project road.

Four laning of project highway is higher priority of both central & concerned state governments. Currently highways have bottlenecks at many places which are being improved as a priority. Due to the poor condition of NH-17 and higher number of accidents some part of traffic uses Mumbai -Pune Expressway and then take Bangalore Highway (NH-48) to go to Goa and parts of Karnataka and Kerala. This traffic is expected to come back on the project highway.

There are three operative toll plazas at project stretch. at km 119.00, km 184.00 and km 243.00 respectively. The following figure shows project alignment and toll plaza locations.

Figure 2-1 : Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is complete. The following photographs illustrate the project section along the corridor.

Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Goa Karnataka Border to Kundapur section of NH17 for years 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22,2022-23 and traffic data from April 2023 to November 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 119 Toll Plaza	AADT for Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023 & Eight month from April 2023 to November 2023	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023 & Eight month from April 2023 to November 2023	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023 & Eight month from April 2023 to November 2023	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023 & Eight month from April 2023 to November 2023	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023 & Eight month from April 2023 to November 2023
2	Km 184 Toll Plaza	AADT for Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023 & Eight month from April 2023 to November 2023	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023 & Eight month from April 2023 to November	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023 & Eight month	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023 & Eight month from April 2023 to November	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023 & Eight month from April 2023 to November 2023

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
			2023	from April 2023 to November 2023	2023	
3	Km 243 Toll Plaza	AADT for Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023 & Eight month from April 2023 to November 2023	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023 & Eight month from April 2023 to November 2023	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023 & Eight month from April 2023 to November 2023	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023 & Eight month from April 2023 to November 2023	For Period from February 2020 to March 2020, 2020-21, 2021-2022, 2022-2023 & Eight month from April 2023 to November 2023

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Minibus /LCV
- Bus
- Truck
- 3 Axle commercial vehicle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23 and from April 2023 to November 2023.

Since the traffic data available for this update is for only eight months, from April 2023 to November 20223, it may not represent the whole year traffic. Traffic was temporarily impacted on account of state elections. Hence a seasonality factor for balance part of year has been applied to average traffic of current eight months to arrive at Annual Average

Daily Traffic of base year 2023-24. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and Annual Average Daily Traffic (AADT) for year 2023-24.

Table 3-3 : Traffic Data at Belekeri Toll Plaza at Km 119.00

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- February 20 to March 20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	1485	1639	1974	3061	3058
2	Minibus/LCV	380	360	150	130	129
3	Bus	308	101	159	234	256
4	Truck	177	256	240	259	253
5	3 Axle	162	130	155	182	132
6	Multi Axle	339	329	519	627	462
7	Oversized Vehicles	8	7	5	6	5
Total		**2859**	**2821**	**3202**	**4497**	**4295**

Table 3-4 : Traffic Data at Holegadde Toll Plaza at Km 184.00

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- February 20 to March 20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	2587	2759	3240	5084	5297
2	Minibus/LCV	830	582	266	292	306
3	Bus	455	293	343	532	614
4	Truck	662	676	693	844	853

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- February 20 to March 20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
5	3 Axle	312	272	277	303	313
6	Multi Axle	888	815	869	1139	1186
7	Oversized Vehicles	2	5	6	6	5
Total		**5736**	**5401**	**5693**	**8198**	**8573**

Table 3-5 : Traffic Data at Shirur Toll Plaza at Km 243.00

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- February 20 to March 20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	2600	2953	3644	5778	6137
2	Minibus/LCV	756	602	318	394	397
3	Bus	463	295	334	523	582
4	Truck	700	684	814	950	941
5	3 Axle	305	273	315	319	325
6	Multi Axle	853	805	873	1123	1168
7	Oversized Vehicles	2	7	6	6	5
Total		**5679**	**5619**	**6304**	**9092**	**9554**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table 3-6.***

Table 3-6 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-7 : Traffic in PCU at Project Stretch Base Year 2023-24

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
	Belekeri at Km 119.00	2859	5557	1.94

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-20	Holegadde at Km 184.00	5736	12124	2.11
	Shirur at Km 243.00	5679	11986	2.11
2020-21	Belekeri at Km 119.00	2821	5150	1.83
	Holegadde at Km 184.00	5401	11043	2.04
	Shirur at Km 243.00	5619	11266	2.00
2021-22	Belekeri at Km 119.00	3202	6219	1.94
	Holegadde at Km 184.00	5693	11512	2.02
	Shirur at Km 243.00	6304	12465	1.98
2022-23	Belekeri at Km 119.00	4497	8125	1.81
	Holegadde at Km 184.00	8198	15705	1.92
	Shirur at Km 243.00	9092	16823	1.85
2023-24	Belekeri at Km 119.00	4295	7276	1.69
	Holegadde at Km 184.00	8573	16452	1.92
	Shirur at Km 243.00	9554	17551	1.84

It can be observed from above that project traffic has PCU index from 1.8 to 2.0 which is an indicator of good proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at three toll plaza locations.

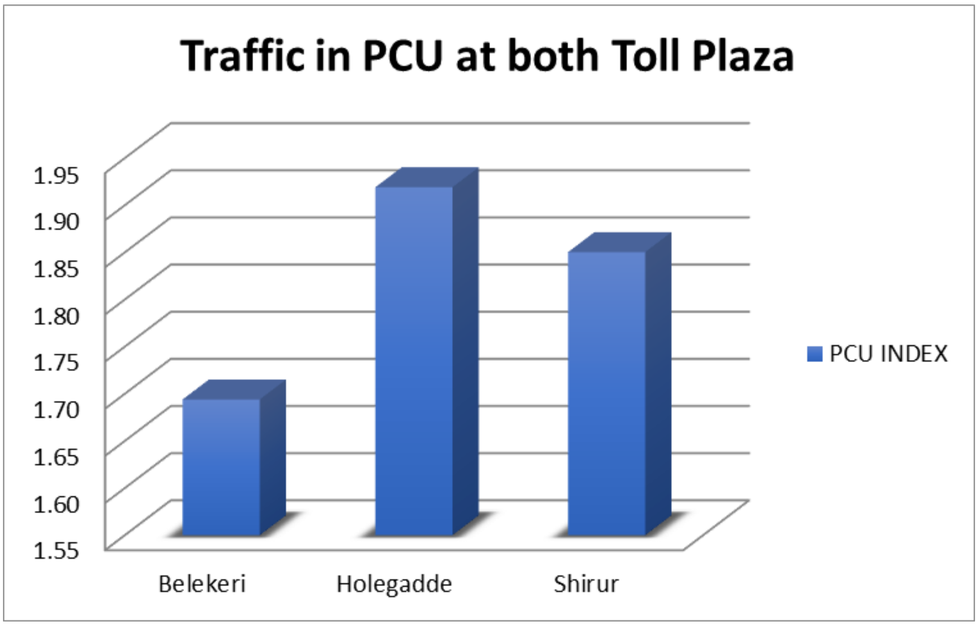
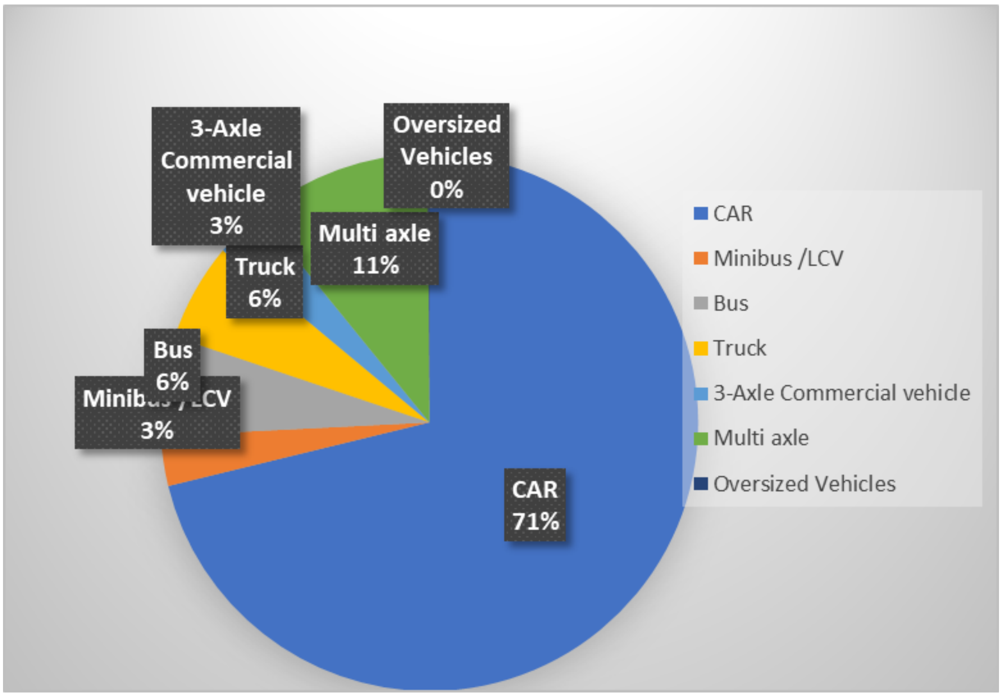


Figure 3-1 : Comparison of PCU Index

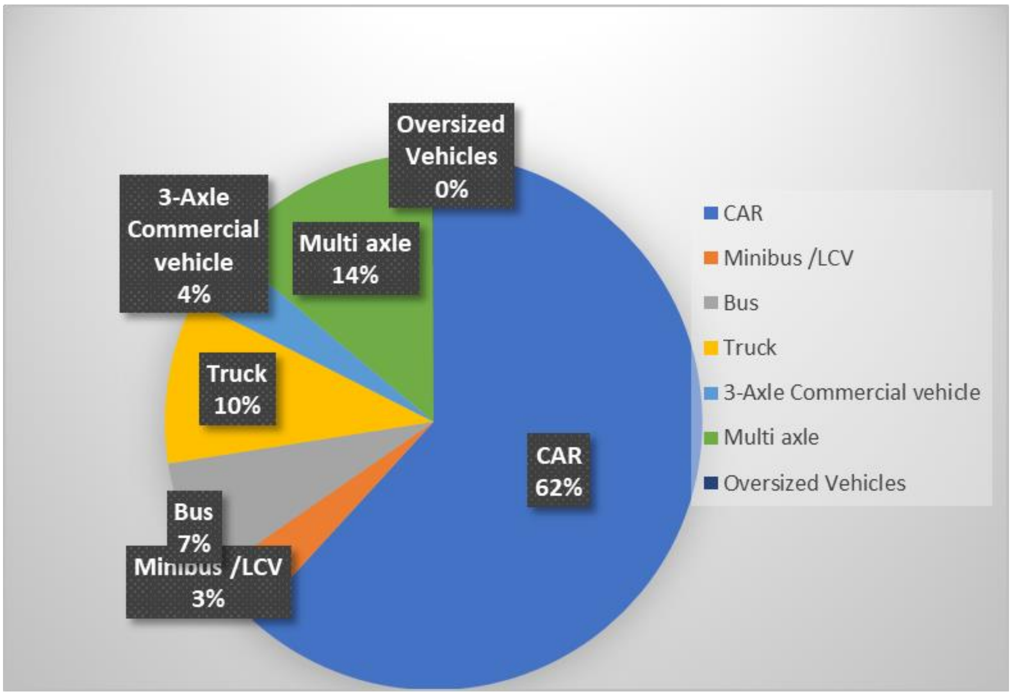
It can be observed that PCU index is consistent at all three plaza locations.

3.4.2 Components of Traffic

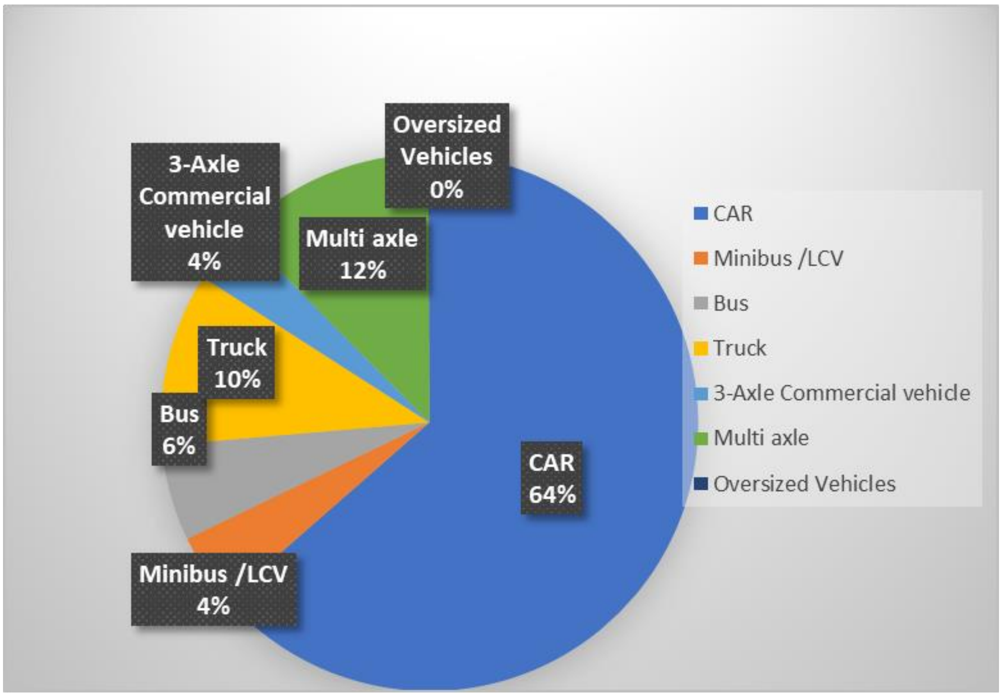
As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.



Model Split of Tollable Vehicle @ KM 119.000



Model Split of Tollable Vehicle @ KM 184.000



Model Split of Tollable Vehicle @ KM 243.000

It is observed that car traffic forms about 71% of total traffic at toll plaza location 1 while multi axle along with 3 axle commercial vehicles are about 14% of total traffic. Truck / Bus and LCV share about 12% and 3% of traffic volume respectively at toll plaza on 119.000 km.

It is observed that car traffic forms about 62% of total traffic at toll plaza location 2 while multi axle along with 3 axle commercial vehicles are about 18% of total traffic. Truck /

Bus and LCV share about 16% and 4% of traffic volume respectively at toll plaza on 184.000 km.

It is observed that car traffic forms about 62% of total traffic at toll plaza location 3 while multi axle along with 3 axle commercial vehicles are about 18% of total traffic. Truck / Bus and LCV share about 17% and 3% of traffic volume respectively at toll plaza on 243.000 km.

Thus, the project corridor has a good mix of about 60% -70% passenger and 30-40% commercial traffic.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base years 2019-20, 2020-21, 2021-22, 2022-2023 & April 2023 to November 2023.

Table 3-8 : Journey Type Bifurcation of Traffic at TP-1 KM 119.00

Sr. No	Type	Traffic Volume (Nos.) 2023-24
1	Single Journey	2339
2	Return Journey	1788
3	Local Commercial Single Journey	158
4	Monthly Pass Local	2
5	Monthly Pass	8

Table 3-9 : Journey Type Bifurcation of Traffic at TP KM 184.00

Sr. No	Type	Traffic Volume (Nos.) 2023-24
1	Single Journey	5024
2	Return Journey	3151
3	Local Commercial Single Journey	386
4	Monthly Pass Local	4
5	Monthly Pass	8

Table 3-10 : Journey Type Bifurcation of Traffic at TP KM 243.00

Sr. No	Type	Traffic Volume (Nos.) 2023-24
1	Single Journey	4951
2	Return Journey	4308
3	Local Commercial Single Journey	276
4	Monthly Pass Local	12
5	Monthly Pass	6

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 54%. Return journey component is 42% and Local Commercial Single Journey is 4% at toll plaza at Km 119.00

The single journey component in total traffic numbers is as high as 59%. Return journey component is 37% and Local Commercial single journey 4% at toll plaza at Km 184.00

The single journey component in total traffic numbers is as high as 52%. Return journey component is 45% and Local Commercial Single Journey is 3% at toll plaza at Km 243.00

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.

2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch runs on west coast of India. Most of the roads other than NH-17 run radial to NH-17 as a complimentary network. There are large number of stream and rivers falling into Arabian sea on west coast. Hence any parallel road would require many major bridges. This has prevented any parallel road to NH-17. The following figure shows bird's eye view of project corridor.

Figure 4-1 : Project corridor and radial roads.

Still geographically there can be alternate routes to project road between certain pairs of origin and destinations. The following figure shows such routes which are much longer than project road practically cannot be considered as alternate routes.

Figure 4-2 : Alternate route at regional level.

Thus, practically there is no alternate route to project road between Goa/ Karnataka border and Kundapur. Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. Further with completion of Mumbai Kanyakumari section of road traffic on project road would get a boost in period 2024-2026 when it would be completed.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Goa/ Karnataka Border – Kundapur section of NH-17 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = k x Log (EI) + A

Where,

P = Number of Vehicles (Mode wise)

EI = Economic Indicator

A = Regression constant

k = Elasticity coefficient (Regression coefficient)

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Karnataka. Toll plazas at Km 119.00. Km 184.00 and 243.00 are in the state of Karnataka. Contribution of Goa / Maharashtra is also substantial at stretch. For elasticity calculations, working data from Karnataka and Maharashtra / Goa has been analysed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Karnataka State.

Table 5-1 : Per Capita Income Vs Car Karnataka

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	90269	1269430	4.96	6.10		
2013	94382	1420767	4.97	6.15	5%	
2014	101864	1572521	5.01	6.20	8%	
2015	105703	1741831	5.02	6.24	4%	
2016	116819	1916373	5.07	6.28	11%	
2017	131260	2110493	5.12	6.32	12%	7.83%

Regression analysis of same is given in figure below

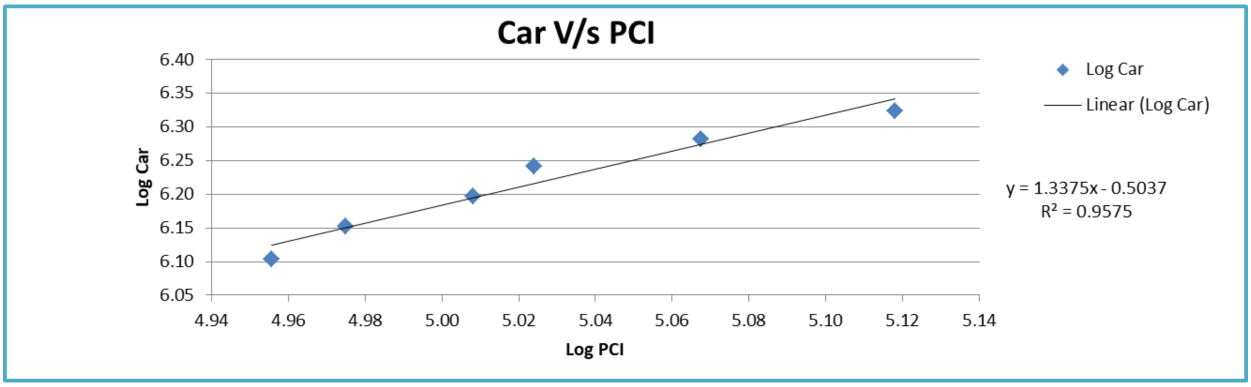


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Karnataka

Table 5-2 : Population Vs Bus Karnataka

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	1458545	9513	6.16	3.98		
2013	1466020	9956	6.17	4.00	1%	
2014	1473384	10925	6.17	4.04	1%	
2015	1480636	11224	6.17	4.05	0%	
2016	1487779	11503	6.17	4.06	0%	
2017	1494812	11888	6.17	4.08	0%	0.49%

Regression analysis of same is given in figure below

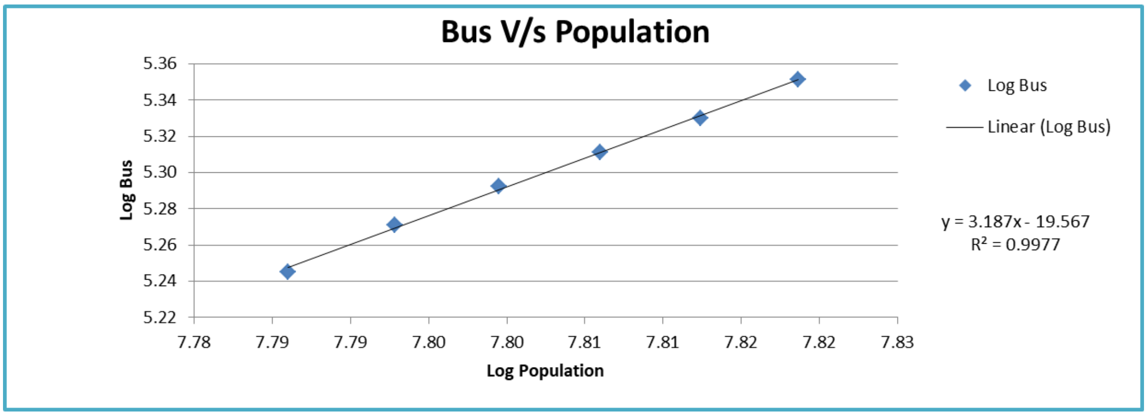


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Karnataka

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details

Table 5-3 : Goods Traffic Vs NSDP Karnataka

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth
2012	554990	221160	5.74	5.34		
2013	586592	258701	5.77	5.41	6%	
2014	639981	294266	5.81	5.47	9%	
2015	671322	331381	5.83	5.52	5%	
2016	749990	367572	5.88	5.57	12%	7.85%

Following figure depict regression analysis and extrapolation.

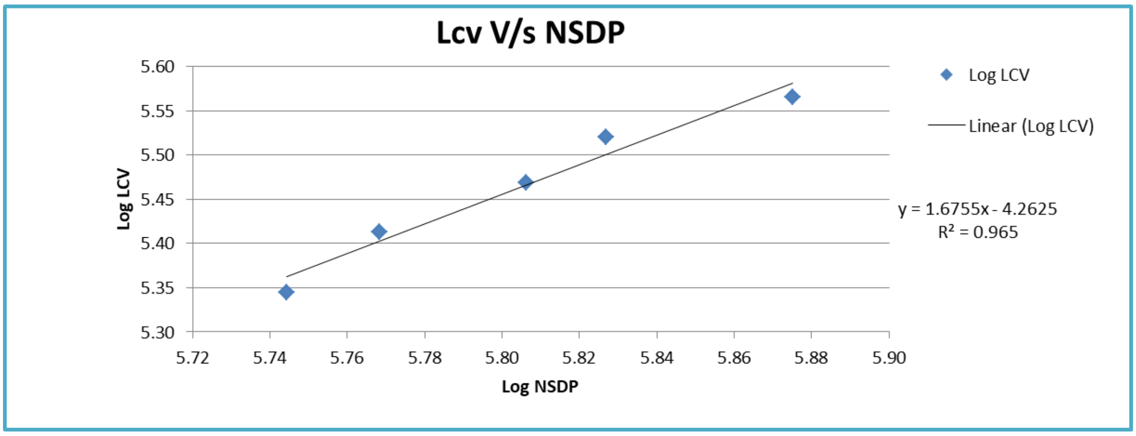


Figure 5-3 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Karnataka.

Table 5-4 : Traffic Truck Vs NSDP Karnataka

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	554990	233422	5.74	5.37		
2013	586592	247639	5.77	5.39	6%	
2014	639981	260989	5.81	5.42	9%	
2015	671322	274971	5.83	5.44	5%	
2016	749990	290415	5.88	5.46	12%	
2017	851880	306290	5.93	5.49	14%	9.00%

Following figure depict regression analysis and extrapolation.

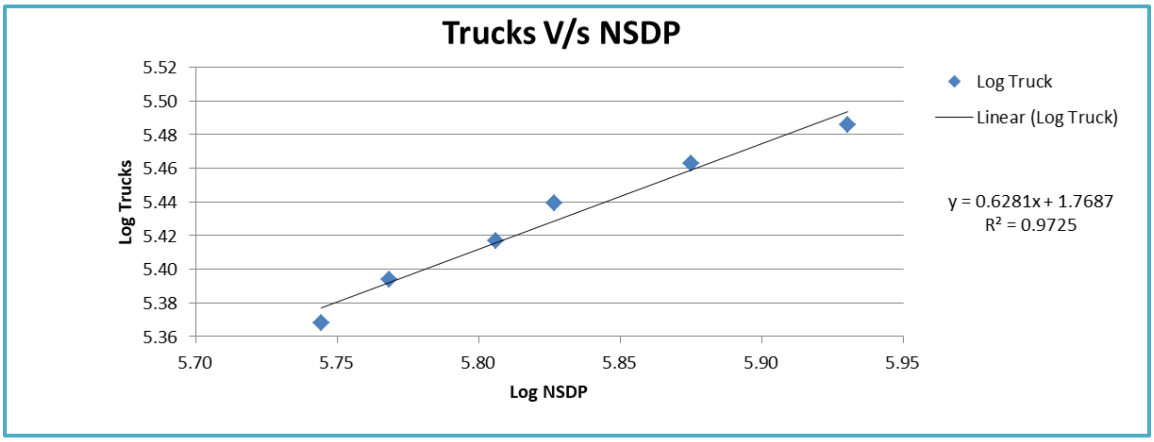


Figure 5-4 : Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Karnataka.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-5 : Summary Regression Analysis Karnataka

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Karnataka	Car/Jeep	PCI	y = 1.3375x + -0.5037	R^2 = 0.9575	1.3375	7.83%	10.47%
	Bus	Population	y = 3.187x - -19.567	R^2 = 0.9977	3.1870	1.52%	4.83%
	LCV	NSDP	y = 1.6755x - -4.2625	R^2 = 0.965	1.6755	7.85%	13.16%
	Truck	NSDP	y = 0.6281x - 1.7687	R^2 = 0.9725	0.6281	9.00%	5.65%

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Maharashtra State.

Table 5-6 : Per Capita Income Vs Car Maharashtra

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	99564	2307841	5.00	6.36		
2013	103904	2592565	5.02	6.41	4%	
2014	109399	2834847	5.04	6.45	5%	
2015	114746	3113773	5.06	6.49	5%	
2016	122422	3406872	5.09	6.53	7%	
2017	132899	3715744	5.12	6.57	9%	5.96%

Regression analysis of same is given in figure below

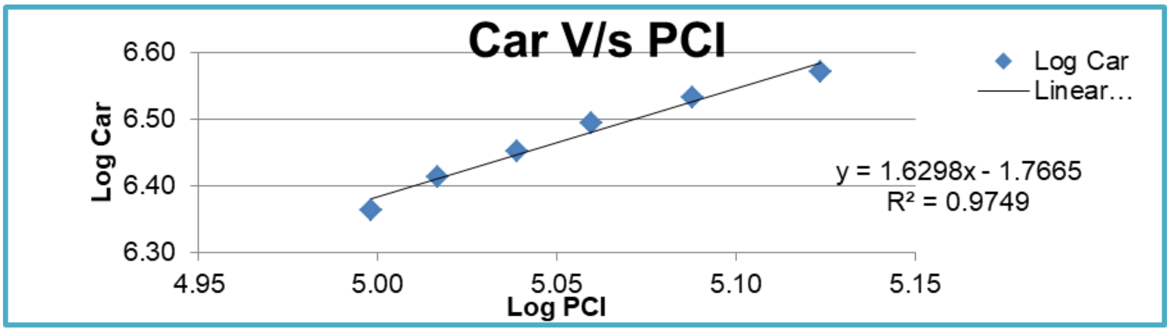


Figure 5-5 : Regression and Elasticity PCI vs. Car – Extrapolation Maharashtra

Table 5-7 : Population Vs Bus Maharashtra

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	112374333	119298	8.05	5.08		
2013	113807248	129535	8.06	5.11	1%	
2014	115229410	140087	8.06	5.15	1%	
2015	116640546	140102	8.07	5.15	1%	
2016	118040394	150427	8.07	5.18	1%	
2017	119428710	160042	8.08	5.20	1%	1.23%

Regression analysis of same is given in figure below

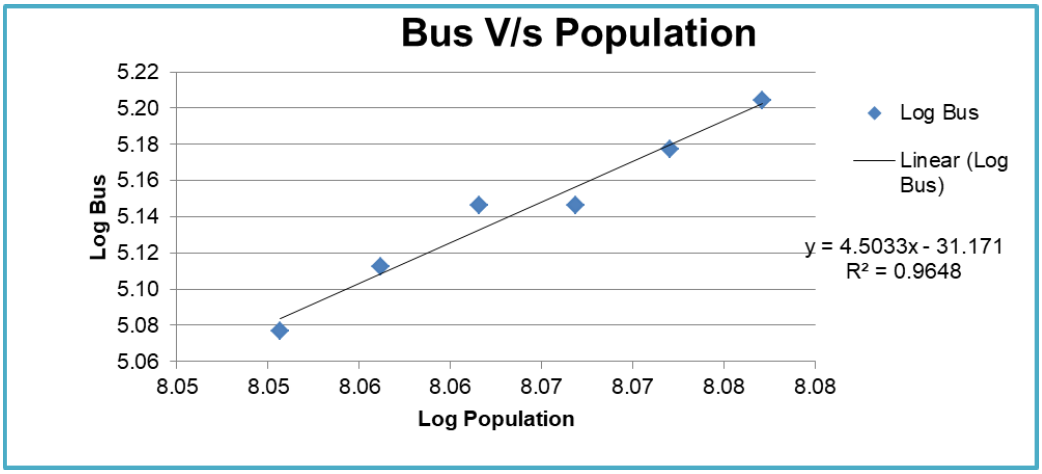


Figure 5-6 : Regression and Elasticity Population vs. Bus – Extrapolation Maharashtra

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Maharashtra

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	1126595	656407	6.05	5.82		
2013	1189711	739725	6.08	5.87	6%	
2014	1267551	803128	6.10	5.90	7%	
2015	1345341	868632	6.13	5.94	6%	
2016	1452439	927903	6.16	5.97	8%	6.56%

Following figure depict regression analysis and extrapolation.

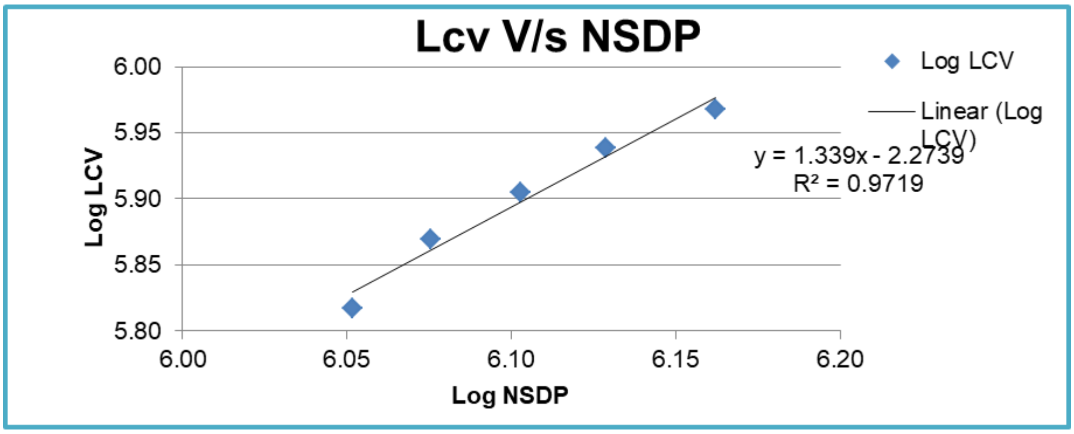


Figure 5-7 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Maharashtra.

Table 5-9 : Trucks Traffic Vs NSDP Maharashtra

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	1126595	411418	6.05	5.61		
2013	1189711	402366	6.08	5.60	6%	
2014	1267551	470128	6.10	5.67	7%	
2015	1345341	491582	6.13	5.69	6%	
2016	1452439	468810	6.16	5.67	8%	
2017	1595514	496439	6.20	5.70	10%	7.22%

Following figure depict regression analysis and extrapolation.

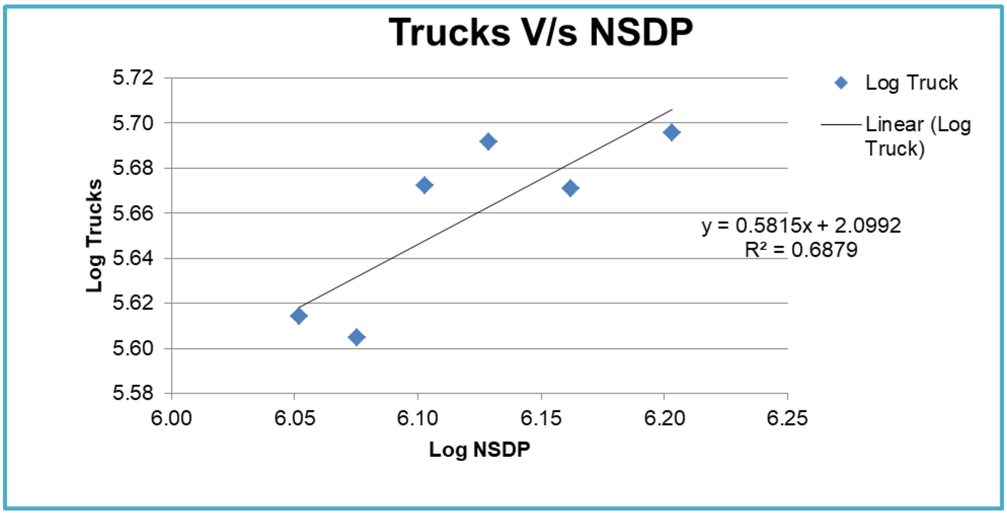


Figure 5-8 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Maharashtra.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-10 : Summary Regression Analysis Maharashtra.

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Maharashtra	Car/Jeep	PCI	y = 1.6298x + -1.7665	R^2 = 0.9749	1.6298	5.96%	9.71%
	Bus	Population	y = 4.5033x - -31.1713	R^2 = 0.9648	4.5033	1.23%	5.52%
	LCV	NSDP	y = 1.339x - -2.2739	R^2 = 0.9719	1.3390	6.56%	8.78%
	Truck	NSDP	y = 0.5815x - 2.0992	R^2 = 0.6879	0.5815	7.22%	4.20%

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Goa/ Karnataka Border to Kundapur is under tolling operation with current concessionaire and has only two month of tolling history from February 2020. Further for last two years traffic is impacted by COVID-19 pandemic. Hence sufficient data points to be able to establish a reliable past trend of traffic growth are not available. A minimum of about 5 -6 years' consistent traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

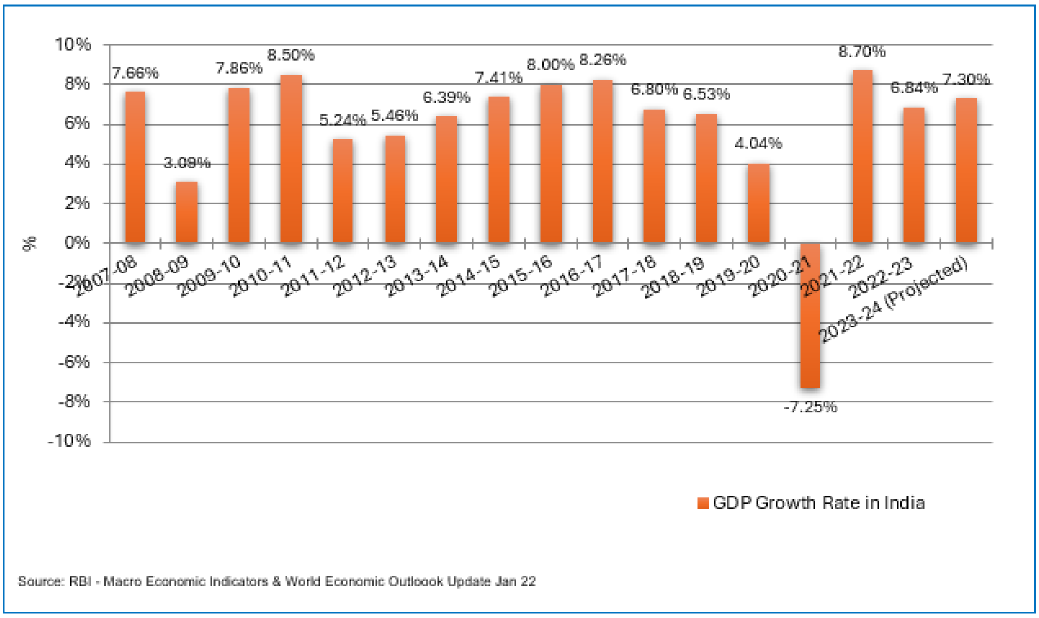


Figure 5-9 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. Government took major policy decision including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honourable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on Make -In- India it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in year 2022-23.

5.6 Developments along and around the Project Corridor & State

West Coast Ports - West coast is coast of submergence (except Malabar Coast) while east coast is an emergent coast. These imply that sea is deeper in west coast than sea on east coast. So, west coast has favourable conditions for natural harbours. This is the reason that ports on west coast of India contribute more in terms of commercial cargo traffic. Expansion of JNPT port may further boost cargo traffic from Kerala, Karnataka and Parts of Tamilnaduon project corridor.

Mangalore - The coastal city of Mangalore is one of the upcoming and fastest developing metropolises of Karnataka. While Mangalore embeds itself in the conventional city affairs, what sets it apart from others is the amalgamation of its heritage, history, culture, food and scenic coastal lines.

Known for its architectural marvels, temples, churches and pristine beaches, the city attracts tourists throughout the year. Some of the popular tourist spots include Mangaladevi temple, St. Aloysius church, Pilikula Nisarga Dhama (a biological park and a picnic spot), Panambur beach and Surathkal beach. Its proximity to Agumbe, Coorg, Kaup beach and temple town Udupi also makes for a quick getaway for city folks.

Mangalore is the largest exporter of coffee in India. One of the flourishing industries in the city is the automobile leaf spring business. Petrochemicals, iron-ore, fertilizers and agricultural processing are some other thriving industries.

In addition, three special economic zones (SEZs) are being set up in the city with IT companies such as TCS, Wipro and Lotus estimated to invest up to Rs.30 billion, creating 67,000 jobs over the next three years. Mangalore is also one of the top five emerging cities of India for outsourcing, according to Alsbridge.

The city is witnessing aggressive industrial development, aiding in its economic growth. Growth of Mangalore as tourism and Industrial hub would have positive impact on growth of traffic on project road

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely Optimistic, Pessimistic and Most Likely with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-11 : Recommended Growth Rates Optimistic

Category / Year	2024-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Car/Jeep/Van	10.02%	9.29%	8.50%	8.14%	8.03%	7.57%
Bus	5.59%	5.28%	4.97%	4.90%	4.75%	4.52%
LCV	5.80%	4.95%	4.12%	3.72%	3.70%	3.28%
2- Axle	5.71%	5.04%	4.36%	4.04%	4.02%	3.68%
3 - Axle	6.04%	5.32%	4.60%	4.26%	4.24%	3.88%
4 to 6 Axle	7.02%	6.17%	5.33%	4.93%	4.90%	4.47%
7 and Above Axle	7.02%	6.17%	5.33%	4.93%	4.90%	4.47%

Table 5-12 : Recommended Growth Rates Pessimistic

Category / Year	2024-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Car/Jeep/Van	9.52%	8.79%	8.00%	7.64%	7.53%	7.07%
Bus	5.09%	4.78%	4.47%	4.40%	4.25%	4.02%
LCV	5.30%	4.45%	3.62%	3.22%	3.20%	2.78%
2- Axle	5.21%	4.54%	3.86%	3.54%	3.52%	3.18%
3 - Axle	5.54%	4.82%	4.10%	3.76%	3.74%	3.38%
4 to6 Axle	6.52%	5.67%	4.83%	4.43%	4.40%	3.97%
7 and Above Axle	6.52%	5.67%	4.83%	4.43%	4.40%	3.97%

Table 5-13 : Recommended Growth Rates Most Likely

Category / Year	2024-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Car/Jeep/Van	9.77%	9.04%	8.25%	7.89%	7.78%	7.32%
Bus	5.34%	5.03%	4.72%	4.65%	4.50%	4.27%
LCV	5.34%	5.03%	4.72%	4.65%	4.50%	4.27%
2- Axle	5.55%	4.70%	3.87%	3.47%	3.45%	3.03%
3 - Axle	5.46%	4.79%	4.11%	3.79%	3.77%	3.43%
4 to 6 Axle	5.79%	5.07%	4.35%	4.01%	3.99%	3.63%
7 and Above Axle	6.77%	5.92%	5.08%	4.68%	4.65%	4.22%

Project road is part of planned Mumbai- Kochi Economic Corridor under Bharatmala Pariyojna. At present various sections of the corridor are under the advanced stage of construction and planning. Out of total about 1300 km of total length of corridor approximately 900 km is either completed or in under construction. Balance 400 km is to be awarded soon under Bharatmala Pariyojna. It is expected that a substantial part of Mumbai – Kochi Economic Corridor would be operational by year 2024-25. This would be

shorter than the current preferred route of Bangalore highway (NH-48) by about 100 km. In such case it is expected that in the horizon year 2024-25 certain part of traffic between Gujarat / Mumbai and Kochi / Kanyakumari would starts using project corridor as most preferred route. Further development of Tuticorin – Kochi economic corridor and ports at Mangalore, Goa and Kochi would also boost traffic on project corridor by year say 2024-25. Same has been considered while taking additional growth of traffic as discussed above.
Traffic and revenue have been worked out on the basis of the above growths and some is presented in subsequent chapter of report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- 119 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3058	129	256	253	132	462	5	4295	7276
2024-25	3364	136	271	268	140	495	6	4680	7860
2025-26	3676	143	284	282	147	525	6	5063	8419
2026-27	4017	150	299	296	155	558	6	5481	9030
2027-28	4390	157	315	311	163	592	6	5934	9684
2028-29	4798	165	331	327	171	628	6	6426	10386
2029-30	5243	173	349	344	180	667	6	6962	11150
2030-31	5688	180	367	359	188	703	6	7491	11891
2031-32	6171	187	385	375	196	740	6	8060	12677
2032-33	6695	195	404	391	205	779	6	8675	13520
2033-34	7264	203	424	408	214	821	6	9340	14428
2034-35	7881	211	445	426	223	864	6	10056	15395
2035-36	8522	219	466	443	232	906	6	10794	16378

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2036-37	9215	227	489	461	241	951	6	11590	17435
2037-38	9965	235	512	480	252	997	6	12447	18563
2038-39	10776	244	538	499	263	1046	6	13372	19776
2039-40	11652	253	564	519	274	1097	6	14365	21066
2040-41	12587	262	591	540	286	1151	6	15423	22438
2041-42	13598	271	619	562	298	1208	6	16562	23905
2042-43	14689	281	648	584	310	1266	6	17784	25461
2043-44	15868	291	679	608	323	1327	6	19102	27133
2044-45	17143	302	710	632	336	1391	6	20520	28917
2045-46	18441	312	741	655	349	1453	6	21957	30710
2046-47	19837	322	774	679	362	1517	6	23497	32619
2047-48	21339	333	809	703	376	1584	6	25150	34658

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- 184KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	5297	306	614	853	313	1186	5	8573	16452
2024-25	5827	323	647	902	332	1268	6	9305	17688
2025-26	6367	339	681	948	349	1346	6	10036	18894
2026-27	6958	355	716	996	367	1428	6	10826	20181
2027-28	7603	372	754	1046	386	1517	6	11684	21573
2028-29	8309	390	794	1099	407	1610	6	12615	23066
2029-30	9081	409	836	1154	428	1710	6	13624	24671
2030-31	9853	426	878	1204	448	1801	6	14616	26214
2031-32	10691	443	922	1257	469	1898	6	15686	27868
2032-33	11600	461	968	1312	490	1999	6	16836	29624

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2033-34	12586	480	1015	1368	512	2106	6	18073	31495
2034-35	13655	499	1066	1427	535	2218	6	19406	33496
2035-36	14765	518	1118	1485	557	2327	6	20776	35521
2036-37	15966	537	1173	1544	580	2442	6	22248	37679
2037-38	17265	556	1231	1607	605	2562	6	23832	39984
2038-39	18669	576	1291	1672	631	2688	6	25533	42438
2039-40	20188	597	1354	1740	658	2820	6	27363	45057
2040-41	21809	619	1417	1810	685	2958	6	29304	47812
2041-42	23560	641	1484	1883	714	3104	6	31392	50760
2042-43	25452	665	1554	1958	744	3256	6	33635	53897
2043-44	27496	689	1628	2037	775	3416	6	36047	57249
2044-45	29704	714	1706	2119	808	3583	6	38640	60825
2045-46	31953	737	1784	2198	839	3743	6	41260	64392
2046-47	34372	761	1865	2279	871	3911	6	44065	68185
2047-48	36975	786	1949	2363	905	4086	6	47070	72219

Table 6-3 : Total Tollable Traffic @ Toll Plaza 3- Chainage 243 KM
(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	6137	397	582	941	325	1168	5	9554	17551
2024-25	6752	419	613	995	345	1249	6	10379	18887
2025-26	7379	440	646	1045	362	1326	6	11204	20192
2026-27	8064	462	680	1097	381	1407	6	12097	21590
2027-28	8813	485	716	1152	401	1493	6	13066	23093
2028-29	9631	509	754	1209	422	1585	6	14116	24709
2029-30	10525	534	794	1269	444	1683	6	15255	26448

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2030-31	11419	556	833	1324	464	1772	6	16374	28117
2031-32	12390	579	874	1381	485	1866	6	17581	29903
2032-33	13442	603	918	1441	507	1965	6	18882	31814
2033-34	14584	627	964	1504	530	2069	6	20284	33856
2034-35	15823	653	1011	1570	554	2179	6	21796	36040
2035-36	17111	677	1061	1634	577	2286	6	23352	38257
2036-37	18504	702	1113	1701	601	2399	6	25026	40625
2037-38	20010	728	1168	1770	627	2517	6	26826	43151
2038-39	21637	754	1225	1842	653	2641	6	28758	45840
2039-40	23397	782	1284	1917	680	2771	6	30837	48710
2040-41	25276	810	1345	1994	709	2907	6	33047	51744
2041-42	27306	840	1409	2074	739	3049	6	35423	54980
2042-43	29498	870	1476	2157	770	3198	6	37975	58430
2043-44	31867	903	1546	2243	803	3355	6	40723	62122
2044-45	34426	937	1619	2334	837	3519	6	43678	66064
2045-46	37032	967	1692	2420	869	3676	6	46662	69995
2046-47	39837	999	1768	2510	902	3840	6	49862	74183
2047-48	42853	1032	1848	2603	936	4012	6	53290	78643

Table 6-4 : Total Tollable Traffic @ Toll Plaza 1- Chainage 119 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3058	129	256	253	132	462	5	4295	7276
2024-25	3349	136	268	266	139	492	6	4656	7813
2025-26	3643	142	280	278	146	520	6	5015	8335
2026-27	3962	148	293	291	153	550	6	5403	8897

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2027-28	4310	154	306	305	160	581	6	5822	9496
2028-29	4688	161	320	319	168	614	6	6276	10141
2029-30	5100	168	335	333	176	648	6	6766	10827
2030-31	5508	174	350	346	183	679	6	7246	11489
2031-32	5948	180	365	360	191	712	6	7762	12197
2032-33	6424	186	380	374	199	746	6	8315	12946
2033-34	6937	193	398	388	207	782	6	8911	13752
2034-35	7492	200	416	403	215	819	6	9551	14607
2035-36	8064	206	434	417	223	855	6	10205	15470
2036-37	8680	212	453	431	231	892	6	10905	16384
2037-38	9342	219	473	447	239	931	6	11657	17364
2038-39	10055	226	494	463	248	973	6	12465	18415
2039-40	10823	233	515	479	257	1016	6	13329	19525
2040-41	11638	240	536	496	266	1061	6	14243	20694
2041-42	12514	248	559	513	276	1107	6	15223	21939
2042-43	13456	256	582	531	287	1156	6	16274	23269
2043-44	14469	264	607	550	298	1207	6	17401	24689
2044-45	15558	272	632	569	309	1260	6	18606	26193
2045-46	16658	280	657	587	320	1310	6	19818	27692
2046-47	17835	288	683	606	331	1362	6	21111	29283
2047-48	19096	296	710	625	342	1416	6	22491	30970

Table 6-5 : Total Tollable Traffic @ Toll Plaza 2- Chainage 184 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	5297	306	614	853	313	1186	5	8573	16452

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2024-25	5801	322	645	897	331	1263	6	9265	17614
2025-26	6310	336	675	937	347	1334	6	9945	18721
2026-27	6864	350	707	979	364	1410	6	10680	19911
2027-28	7466	366	741	1024	381	1489	6	11473	21181
2028-29	8122	382	776	1070	399	1573	6	12328	22536
2029-30	8835	399	812	1119	418	1663	6	13252	23991
2030-31	9541	413	848	1163	435	1743	6	14149	25369
2031-32	10304	427	887	1208	453	1827	6	15112	26837
2032-33	11128	443	927	1255	471	1915	6	16145	28396
2033-34	12018	459	969	1304	490	2008	6	17254	30059
2034-35	12979	475	1013	1354	510	2105	6	18442	31822
2035-36	13969	490	1057	1403	529	2198	6	19652	33589
2036-37	15036	506	1103	1453	549	2296	6	20949	35469
2037-38	16183	522	1151	1504	570	2398	6	22334	37459
2038-39	17418	539	1202	1557	591	2505	6	23818	39576
2039-40	18748	556	1254	1612	613	2616	6	25405	41818
2040-41	20160	573	1307	1668	635	2731	6	27080	44166
2041-42	21677	592	1363	1726	658	2851	6	28873	46663
2042-43	23309	611	1421	1787	683	2977	6	30794	49322
2043-44	25064	630	1480	1851	709	3107	6	32847	52138
2044-45	26951	650	1543	1916	735	3243	6	35044	55129
2045-46	28857	667	1605	1977	760	3372	6	37244	58085
2046-47	30898	686	1669	2041	786	3506	6	39592	61219
2047-48	33083	705	1736	2106	812	3645	6	42093	64532

Table 6-6 : Total Tollable Traffic @ Toll Plaza 3- Chainage 243 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	6137	397	582	941	325	1168	5	9554	17551
2024-25	6721	418	611	989	343	1243	6	10331	18798
2025-26	7312	436	640	1034	359	1313	6	11100	20001
2026-27	7954	456	670	1081	376	1387	6	11930	21288
2027-28	8653	477	702	1130	393	1465	6	12826	22663
2028-29	9413	499	736	1181	412	1547	6	13794	24137
2029-30	10240	521	771	1235	432	1634	6	14839	25716
2030-31	11059	540	805	1283	449	1713	6	15855	27216
2031-32	11945	560	841	1332	467	1795	6	16946	28810
2032-33	12901	581	879	1383	486	1881	6	18117	30508
2033-34	13932	602	918	1437	506	1972	6	19373	32319
2034-35	15046	624	959	1492	526	2067	6	20720	34242
2035-36	16195	644	1001	1545	546	2159	6	22096	36180
2036-37	17431	665	1045	1599	566	2254	6	23566	38229
2037-38	18761	687	1091	1656	587	2354	6	25142	40414
2038-39	20194	709	1139	1714	609	2458	6	26829	42732
2039-40	21736	732	1189	1774	632	2567	6	28636	45198
2040-41	23372	756	1240	1836	655	2680	6	30545	47786
2041-42	25132	780	1292	1901	679	2797	6	32587	50532
2042-43	27024	804	1347	1968	705	2920	6	34774	53457
2043-44	29059	830	1404	2038	731	3048	6	37116	56566
2044-45	31248	856	1463	2110	758	3182	6	39623	59871
2045-46	33457	880	1521	2177	784	3308	6	42133	63136
2046-47	35822	904	1582	2246	810	3439	6	44809	66595

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2047-48	38355	929	1645	2318	837	3576	6	47666	70268

Traffic projections for Most Likely scenario is given as under

Table 6-7 : Total Tollable Traffic @ Toll Plaza 1- Chainage 119 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3058	129	256	253	132	462	5	4295	7276
2024-25	3357	136	270	267	140	493	6	4669	7838
2025-26	3660	142	283	280	147	522	6	5040	8379
2026-27	3991	148	296	294	154	553	6	5442	8961
2027-28	4352	155	311	308	162	586	6	5880	9592
2028-29	4745	162	327	322	170	620	6	6352	10262
2029-30	5174	169	343	338	178	656	6	6864	10984
2030-31	5601	175	359	352	186	689	6	7368	11682
2031-32	6062	182	376	366	194	723	6	7909	12424
2032-33	6561	189	394	382	202	759	6	8493	13221
2033-34	7101	196	412	398	210	798	6	9121	14073
2034-35	7686	203	431	414	219	838	6	9797	14981
2035-36	8292	210	451	430	228	877	6	10494	15908
2036-37	8946	217	472	446	237	917	6	11241	16890
2037-38	9652	224	493	463	246	960	6	12044	17941
2038-39	10413	232	516	480	255	1005	6	12907	19064
2039-40	11233	240	539	498	266	1051	6	13833	20259
2040-41	12107	248	562	517	277	1100	6	14817	21524
2041-42	13049	257	588	536	288	1151	6	15875	22877
2042-43	14065	266	615	556	300	1205	6	17013	24327

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2043-44	15160	275	643	577	312	1260	6	18233	25866
2044-45	16339	284	672	598	324	1318	6	19541	27505
2045-46	17534	293	701	619	336	1373	6	20862	29147
2046-47	18818	302	730	640	348	1431	6	22275	30892
2047-48	20196	311	761	662	360	1491	6	23787	32748

Table 6-8 : Total Tollable Traffic @ Toll Plaza 2- Chainage 184 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	5297	306	614	853	313	1186	5	8573	16452
2024-25	5814	322	647	900	331	1266	6	9286	17655
2025-26	6339	336	679	944	348	1341	6	9993	18818
2026-27	6911	352	713	989	365	1420	6	10756	20057
2027-28	7536	368	748	1036	383	1504	6	11581	21384
2028-29	8217	385	786	1086	402	1593	6	12475	22812
2029-30	8959	402	825	1137	423	1688	6	13440	24340
2030-31	9697	418	864	1184	441	1774	6	14384	25801
2031-32	10497	434	904	1233	460	1864	6	15398	27354
2032-33	11363	450	947	1284	480	1959	6	16489	29014
2033-34	12301	467	991	1337	501	2059	6	17662	30781
2034-35	13316	484	1037	1392	523	2164	6	18922	32663
2035-36	14366	501	1085	1445	544	2265	6	20212	34559
2036-37	15499	518	1136	1500	566	2371	6	21596	36579
2037-38	16721	535	1188	1556	588	2482	6	23076	38716
2038-39	18038	554	1243	1615	611	2598	6	24665	40994
2039-40	19459	573	1301	1676	636	2719	6	26370	43420

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2040-41	20973	592	1359	1740	661	2845	6	28176	45971
2041-42	22604	612	1421	1806	687	2976	6	30112	48683
2042-43	24362	633	1484	1874	714	3115	6	32188	51572
2043-44	26258	655	1551	1944	743	3260	6	34417	54652
2044-45	28301	677	1621	2017	773	3411	6	36806	57926
2045-46	30373	697	1690	2086	800	3556	6	39208	61176
2046-47	32596	718	1762	2157	829	3706	6	41774	64621
2047-48	34983	740	1837	2231	859	3863	6	44519	68285

Table 6-9 : Total Tollable Traffic @ Toll Plaza 3- Chainage 230 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	6137	397	582	941	325	1168	5	9554	17551
2024-25	6736	419	612	992	345	1247	6	10357	18850
2025-26	7344	439	642	1040	362	1320	6	11153	20102
2026-27	8007	460	675	1090	380	1398	6	12016	21450
2027-28	8730	482	709	1142	399	1480	6	12948	22890
2028-29	9519	505	744	1196	419	1567	6	13956	24432
2029-30	10379	529	781	1253	440	1660	6	15048	26092
2030-31	11235	550	817	1304	459	1744	6	16115	27675
2031-32	12162	572	856	1358	479	1832	6	17265	29370
2032-33	13166	594	896	1414	499	1925	6	18500	31174
2033-34	14252	617	938	1472	520	2023	6	19828	33098
2034-35	15428	641	983	1532	543	2125	6	21258	35153
2035-36	16644	663	1029	1590	564	2224	6	22720	37223
2036-37	17956	686	1076	1650	587	2327	6	24288	39423

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2037-38	19372	710	1126	1712	610	2435	6	25971	41766
2038-39	20900	734	1178	1778	634	2549	6	27779	44269
2039-40	22548	760	1232	1845	660	2668	6	29719	46932
2040-41	24302	786	1288	1915	686	2792	6	31775	49739
2041-42	26193	812	1346	1987	713	2922	6	33979	52725
2042-43	28231	840	1406	2062	741	3058	6	36344	55906
2043-44	30428	868	1469	2140	770	3200	6	38881	59294
2044-45	32795	898	1534	2221	800	3349	6	41603	62905
2045-46	35196	924	1599	2297	829	3491	6	44342	66494
2046-47	37774	952	1667	2376	859	3638	6	47272	70306
2047-48	40540	980	1738	2457	890	3791	6	50402	74352

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Goa/ Karnataka - Kundarpur project, the Target Date and Target Traffic are defined as under:

Target Date - 1st April 2022

Target Traffic - 21307 in PCU

The concession period shall be extended as per the above provisions.

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Goa / Karnataka Border- Kundapur section of NH-17 is based on the old toll policy. As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued for 50 trips in month at 2/3d rate..
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
   a) Local Passenger Car Jeep Van I - Rs. 275 per month as per fee notification
   b) Local commercial vehicles single at 50% rate for normal single trip

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A} - \text{WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

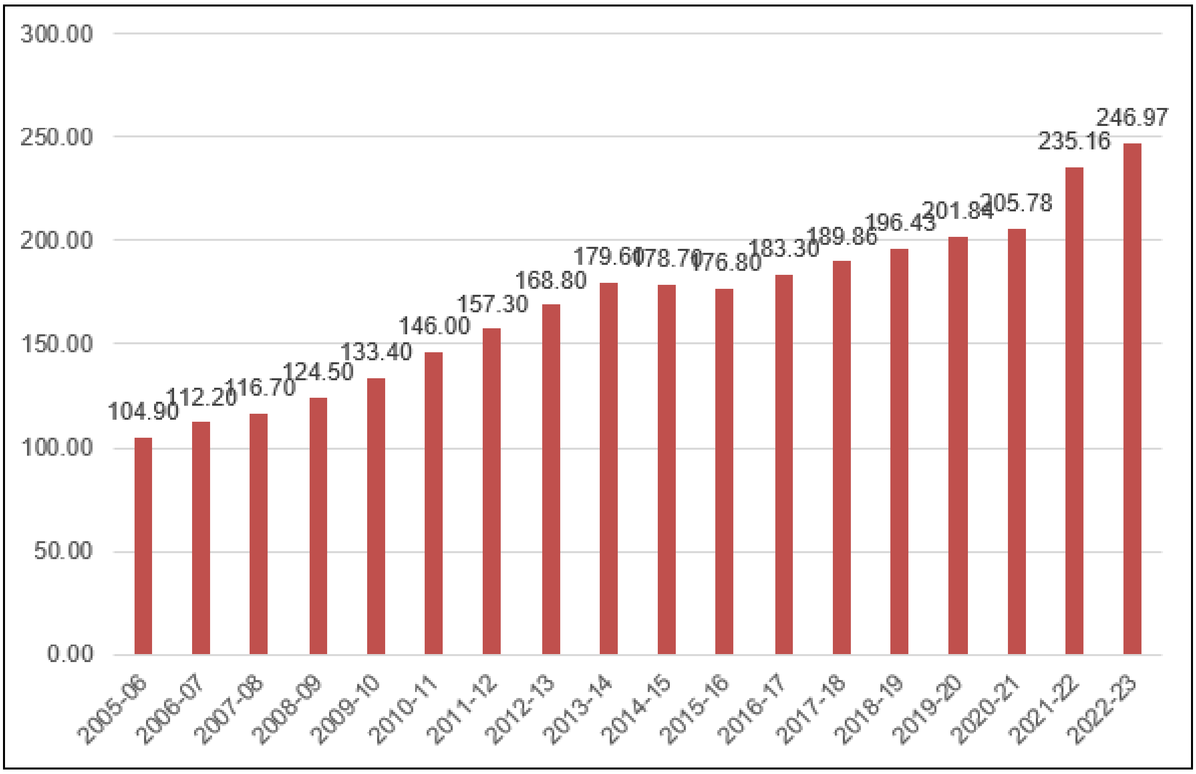


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

The toll rates have been projected on the basis of existing project length received vide PCOD- III certificate.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey @ Km 119.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2023-24	110	175	360	360	390	550	695
2024-25	115	180	370	370	405	570	720
2025-26	120	190	390	390	425	600	755
2026-27	125	200	410	410	450	630	795
2027-28	135	210	430	430	470	665	835
2028-29	140	220	455	455	495	695	880
2029-30	145	230	475	475	520	735	925
2030-31	155	245	500	500	550	770	975
2031-32	165	255	525	525	575	810	1025
2032-33	170	270	555	555	605	855	1075
2033-34	180	285	585	585	640	895	1135
2034-35	190	300	615	615	670	945	1195
2035-36	200	315	645	645	705	995	1255
2036-37	210	330	680	680	745	1045	1320
2037-38	220	350	715	715	785	1105	1390
2038-39	235	365	755	755	825	1160	1465
2039-40	245	385	795	795	870	1225	1545
2040-41	260	405	840	840	915	1290	1630
2041-42	275	430	885	885	965	1360	1715
2042-43	290	455	930	930	1020	1435	1810
2043-44	305	475	980	980	1075	1510	1910
2044-45	320	505	1035	1035	1135	1595	2015
2045-46	340	530	1095	1095	1195	1680	2125
2046-47	355	560	1155	1155	1260	1775	2240
2047-48	375	590	1215	1215	1330	1870	2365

Table 7-3 : Toll Rates for Single Journey @ Km 184.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2023-24	110	170	355	355	390	550	685
2024-25	110	175	365	365	400	565	710
2025-26	120	185	385	385	420	595	745
2026-27	125	195	405	405	445	625	785
2027-28	130	205	425	425	465	660	825
2028-29	135	215	445	445	490	690	865
2029-30	145	225	470	470	515	725	910
2030-31	150	240	495	495	540	765	955
2031-32	160	250	520	520	570	805	1005
2032-33	165	265	545	545	600	845	1060
2033-34	175	280	575	575	630	890	1115
2034-35	185	295	605	605	665	935	1170
2035-36	195	310	640	640	700	985	1235
2036-37	205	325	670	670	735	1040	1300
2037-38	215	340	705	705	775	1095	1370
2038-39	230	360	745	745	815	1155	1440
2039-40	240	380	785	785	860	1215	1520
2040-41	255	400	825	825	905	1280	1600
2041-42	265	420	870	870	955	1350	1685
2042-43	280	445	920	920	1005	1420	1780
2043-44	295	470	970	970	1060	1500	1875
2044-45	310	495	1020	1020	1120	1580	1975
2045-46	330	520	1080	1080	1180	1670	2085
2046-47	350	550	1140	1140	1245	1760	2200
2047-48	365	580	1200	1200	1310	1855	2320

Table 7-4 : Toll Rates for Single Journey @ Km 243.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2023-24	100	160	330	330	360	520	630
2024-25	100	160	340	340	370	530	645
2025-26	105	170	355	355	390	560	680
2026-27	110	180	375	375	410	585	715
2027-28	115	190	395	395	430	615	750
2028-29	120	195	415	415	450	650	790
2029-30	130	205	435	435	475	680	830
2030-31	135	220	455	455	500	715	870
2031-32	140	230	480	480	525	755	915
2032-33	150	240	505	505	550	790	965
2033-34	155	255	530	530	580	835	1015
2034-35	165	265	560	560	610	875	1070
2035-36	175	280	590	590	640	925	1125
2036-37	185	295	620	620	675	970	1185
2037-38	195	310	655	655	710	1025	1245
2038-39	205	330	685	685	750	1080	1310
2039-40	215	345	725	725	790	1135	1385

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2040-41	225	365	765	765	830	1195	1455
2041-42	240	385	805	805	875	1260	1535
2042-43	250	405	850	850	925	1330	1620
2043-44	265	425	895	895	975	1400	1705
2044-45	280	450	940	940	1030	1480	1800
2045-46	295	475	995	995	1085	1560	1900
2046-47	310	500	1050	1050	1145	1645	2000
2047-48	325	530	1105	1105	1205	1735	2110

Table 7-5 : Toll Rates for Return journey @ Km 119.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2023-24	165	260	535	535	590	825	1045
2024-25	170	270	555	555	610	855	1080
2025-26	180	285	585	585	640	900	1135
2026-27	190	300	615	615	670	945	1195
2027-28	200	315	645	645	705	995	1255
2028-29	210	330	680	680	745	1045	1320
2029-30	220	345	715	715	780	1100	1390
2030-31	235	365	750	750	820	1155	1460
2031-32	245	385	790	790	865	1215	1535
2032-33	255	405	830	830	910	1280	1615
2033-34	270	425	875	875	955	1345	1700
2034-35	285	445	920	920	1005	1415	1790
2035-36	300	470	970	970	1060	1490	1885
2036-37	315	495	1020	1020	1115	1570	1985
2037-38	335	520	1075	1075	1175	1655	2090
2038-39	350	550	1130	1130	1240	1745	2200
2039-40	370	580	1195	1195	1305	1835	2320
2040-41	390	610	1255	1255	1375	1935	2445
2041-42	410	645	1325	1325	1450	2040	2575
2042-43	435	680	1395	1395	1530	2150	2715
2043-44	455	715	1475	1475	1610	2265	2865
2044-45	480	755	1555	1555	1700	2390	3020
2045-46	510	795	1640	1640	1795	2525	3185
2046-47	535	840	1730	1730	1890	2660	3360
2047-48	565	885	1825	1825	1995	2810	3545

Table 7-6 : Toll Rates for Return Journey @ Km 184.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2023-24	165	255	535	535	580	825	1030
2024-25	170	265	550	550	600	850	1065
2025-26	175	280	580	580	630	895	1115
2026-27	185	295	605	605	665	940	1175

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2027-28	195	310	640	640	700	985	1235
2028-29	205	325	670	670	735	1040	1295
2029-30	215	340	705	705	770	1090	1365
2030-31	225	360	740	740	810	1145	1435
2031-32	240	375	780	780	855	1205	1510
2032-33	250	395	820	820	895	1270	1585
2033-34	265	415	865	865	945	1335	1670
2034-35	280	440	910	910	995	1405	1760
2035-36	290	465	955	955	1045	1480	1850
2036-37	310	485	1010	1010	1100	1560	1950
2037-38	325	515	1060	1060	1160	1640	2050
2038-39	340	540	1120	1120	1220	1730	2160
2039-40	360	570	1180	1180	1290	1820	2275
2040-41	380	600	1240	1240	1355	1920	2400
2041-42	400	630	1310	1310	1430	2025	2530
2042-43	420	665	1380	1380	1510	2135	2665
2043-44	445	705	1455	1455	1590	2250	2810
2044-45	470	740	1535	1535	1675	2370	2965
2045-46	495	780	1620	1620	1770	2500	3130
2046-47	520	825	1705	1705	1865	2640	3300
2047-48	550	870	1800	1800	1970	2785	3480

Table 7-7 : Toll Rates for Return journey @ Km 243.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2023-24	145	235	495	495	540	780	950
2024-25	150	245	510	510	555	800	970
2025-26	160	255	535	535	585	840	1020
2026-27	165	270	560	560	610	880	1070
2027-28	175	280	590	590	645	925	1125
2028-29	185	295	620	620	675	970	1185
2029-30	195	310	650	650	710	1020	1245
2030-31	200	325	685	685	745	1075	1310
2031-32	215	345	720	720	785	1130	1375
2032-33	225	360	760	760	825	1190	1445
2033-34	235	380	795	795	870	1250	1520
2034-35	250	400	840	840	915	1315	1600
2035-36	260	420	885	885	965	1385	1685
2036-37	275	445	930	930	1015	1460	1775
2037-38	290	465	980	980	1070	1535	1870
2038-39	305	490	1030	1030	1125	1615	1970
2039-40	320	520	1085	1085	1185	1705	2075
2040-41	340	545	1145	1145	1250	1795	2185
2041-42	355	575	1205	1205	1315	1890	2305
2042-43	375	605	1270	1270	1385	1995	2430
2043-44	395	640	1340	1340	1465	2100	2560
2044-45	420	675	1415	1415	1540	2215	2700

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2045-46	440	710	1490	1490	1625	2340	2845
2046-47	465	750	1575	1575	1715	2465	3005
2047-48	490	790	1660	1660	1810	2600	3170

Table 7-8 : Toll Rates for Monthly Pass Local Car Ticket @ all Toll Plaza

Year	Car	Minibus /LCV
2023-24	330	330
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845
2043-44	890	890
2044-45	940	940
2045-46	990	990
2046-47	1045	1045
2047-48	1105	1105

Table 7-9 : Toll Rates for Monthly Pass @ Km 119.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2023-24	3695	5795	11935	11935	13060	18380	23190
2024-25	3825	6000	12355	12355	13520	19020	24005
2025-26	4020	6310	12985	12985	14210	19990	25235
2026-27	4230	6635	13655	13655	14940	21015	26530
2027-28	4445	6975	14355	14355	15710	22100	27900
2028-29	4675	7335	15095	15095	16515	23235	29330
2029-30	4915	7710	15870	15870	17365	24425	30840
2030-31	5170	8110	16690	16690	18265	25690	32430
2031-32	5435	8530	17555	17555	19210	27020	34115
2032-33	5720	8975	18470	18470	20210	28430	35890

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2033-34	6020	9440	19435	19435	21270	29915	37770
2034-35	6335	9940	20455	20455	22385	31490	39755
2035-36	6670	10465	21535	21535	23565	33150	41855
2036-37	7025	11020	22675	22675	24815	34905	44070
2037-38	7400	11605	23885	23885	26135	36765	46415
2038-39	7795	12225	25160	25160	27535	38725	48895
2039-40	8210	12880	26510	26510	29010	40805	51520
2040-41	8655	13575	27935	27935	30575	43000	54295
2041-42	9125	14310	29445	29445	32225	45325	57230
2042-43	9620	15085	31045	31045	33975	47785	60335
2043-44	10140	15905	32735	32735	35825	50390	63625
2044-45	10695	16775	34525	34525	37785	53140	67100
2045-46	11285	17695	36420	36420	39855	56055	70780
2046-47	11905	18670	38425	38425	42050	59140	74675
2047-48	12560	19700	40545	40545	44370	62405	78800

Table 7-10 : Toll Rates for Monthly Pass @ Km 184.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2023-24	3615	5720	11835	11835	12940	18315	22875
2024-25	3730	5905	12215	12215	13355	18895	23610
2025-26	3920	6205	12835	12835	14035	19855	24815
2026-27	4120	6520	13490	13490	14750	20870	26085
2027-28	4335	6855	14185	14185	15510	21940	27425
2028-29	4555	7205	14910	14910	16300	23065	28830
2029-30	4790	7575	15675	15675	17140	24250	30310
2030-31	5035	7970	16485	16485	18025	25500	31870
2031-32	5300	8380	17340	17340	18955	26820	33525
2032-33	5575	8815	18240	18240	19945	28215	35270
2033-34	5865	9280	19195	19195	20985	29690	37110
2034-35	6175	9765	20200	20200	22085	31245	39060
2035-36	6500	10280	21265	21265	23250	32895	41120
2036-37	6845	10825	22390	22390	24485	34635	43295
2037-38	7205	11400	23585	23585	25785	36475	45595
2038-39	7590	12005	24840	24840	27160	38420	48030
2039-40	8000	12650	26175	26175	28615	40480	50605
2040-41	8430	13330	27580	27580	30155	42660	53325
2041-42	8885	14050	29070	29070	31785	44965	56205
2042-43	9365	14815	30645	30645	33505	47400	59255
2043-44	9875	15620	32315	32315	35330	49980	62480
2044-45	10415	16475	34080	34080	37260	52710	65890
2045-46	10985	17375	35945	35945	39300	55595	69505
2046-47	11590	18330	37925	37925	41465	58655	73325
2047-48	12230	19340	40015	40015	43750	61890	77370

Table 7-11 : Toll Rates for Monthly Pass @ Km 243.000

Year	Car	Minibus /LCV	Bus	Truck	3-Axle	Multi axle	Oversized Vehicles
2023-24	3260	5265	11030	11030	12035	17300	21060
2023-24	3340	5395	11305	11305	12330	17725	21580
2024-25	3510	5665	11875	11875	12950	18620	22665
2025-26	3685	5955	12475	12475	13605	19560	23815
2026-27	3870	6255	13105	13105	14300	20555	25020
2027-28	4070	6575	13775	13775	15025	21600	26300
2028-29	4280	6910	14480	14480	15795	22710	27645
2029-30	4500	7265	15225	15225	16610	23875	29065
2030-31	4730	7640	16010	16010	17465	25110	30565
2031-32	4975	8040	16840	16840	18375	26410	32150
2032-33	5235	8455	17720	17720	19330	27785	33825
2033-34	5510	8900	18645	18645	20340	29240	35600
2034-35	5800	9365	19625	19625	21410	30780	37470
2035-36	6105	9860	20665	20665	22540	32405	39445
2036-37	6430	10385	21760	21760	23735	34120	41540
2037-38	6770	10935	22915	22915	25000	35935	43750
2038-39	7135	11520	24140	24140	26335	37860	46090
2039-40	7515	12140	25435	25435	27750	39890	48560
2040-41	7920	12795	26810	26810	29245	42040	51180
2041-42	8350	13485	28260	28260	30825	44315	53945
2042-43	8800	14220	29790	29790	32500	46720	56875
2043-44	9280	14995	31415	31415	34270	49265	59975
2044-45	9790	15815	33135	33135	36145	51960	63255
2045-46	10325	16680	34950	34950	38130	54810	66725
2046-47	10895	17600	36875	36875	40230	57825	70400

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2047-48 starting from the year 2023-24 are shown in tables below.

Table 7-12 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	TP3	Total
2023-24	27.18	63.77	62.08	**153.03**
2024-25	30.33	69.91	67.95	**168.18**

Year	TP-1	TP2	TP3	Total
2025-26	34.14	78.93	76.44	**189.51**
2026-27	38.40	88.37	85.36	**212.14**
2027-28	43.76	99.49	96.21	**239.47**
2028-29	48.96	110.85	107.78	**267.58**
2029-30	54.99	125.00	121.61	**301.60**
2030-31	62.04	139.13	134.86	**336.02**
2031-32	69.86	156.58	151.41	**377.85**
2032-33	77.55	173.28	168.97	**419.80**
2033-34	87.23	194.32	188.09	**469.64**
2034-35	98.03	217.53	211.22	**526.79**
2035-36	110.02	242.84	236.35	**589.20**
2036-37	122.62	270.79	263.21	**656.62**
2037-38	137.57	301.61	294.39	**733.57**
2038-39	154.59	338.06	328.47	**821.11**
2039-40	173.52	378.01	367.39	**918.92**
2040-41	194.50	421.75	409.48	**1025.73**
2041-42	218.43	469.71	458.13	**1146.26**
2042-43	245.54	524.93	511.39	**1281.86**
2043-44	275.71	589.58	574.16	**1439.45**
2044-45	308.58	656.94	642.85	**1608.37**
2045-46	346.90	735.16	715.93	**1797.99**
2046-47	386.67	820.67	798.72	**2006.06**
2047-48	433.50	912.79	889.85	**2236.14**

Table 7-13 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	TP3	Total
2023-24	27.18	63.77	62.08	**153.03**

Year	TP-1	TP2	TP3	Total
2024-25	30.19	69.60	67.66	**167.45**
2025-26	33.86	78.21	75.76	**187.84**
2026-27	37.90	87.21	84.21	**209.31**
2027-28	42.95	97.71	94.44	**235.11**
2028-29	47.83	108.35	105.30	**261.48**
2029-30	53.49	121.65	118.28	**293.42**
2030-31	60.03	134.73	130.57	**325.33**
2031-32	67.27	150.90	145.90	**364.07**
2032-33	74.35	166.23	162.04	**402.61**
2033-34	83.23	185.62	179.55	**448.41**
2034-35	93.18	206.79	200.65	**500.62**
2035-36	104.17	229.78	223.49	**557.44**
2036-37	115.57	255.01	247.69	**618.27**
2037-38	129.07	282.71	275.73	**687.51**
2038-39	144.36	315.31	306.17	**765.84**
2039-40	161.31	350.85	340.92	**853.08**
2040-41	179.92	389.63	378.22	**947.77**
2041-42	201.08	431.94	421.26	**1054.28**
2042-43	225.00	480.43	468.14	**1173.57**
2043-44	251.36	537.01	523.09	**1311.46**
2044-45	280.01	595.54	582.92	**1458.47**
2045-46	313.29	663.34	646.17	**1622.80**
2046-47	347.60	736.98	717.47	**1802.05**
2047-48	387.73	815.78	795.52	**1999.03**

Table 7-14 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	TP2	TP3	Total
2023-24	27.18	63.77	62.08	**153.03**
2024-25	30.25	69.75	67.84	**167.84**
2025-26	33.96	78.56	76.18	**188.70**
2026-27	38.11	87.77	84.85	**210.73**
2027-28	43.30	98.57	95.42	**237.29**
2028-29	48.36	109.59	106.65	**264.59**
2029-30	54.19	123.27	120.06	**297.52**
2030-31	60.97	136.88	132.85	**330.69**
2031-32	68.49	153.71	148.77	**370.98**
2032-33	75.86	169.75	165.62	**411.23**
2033-34	85.11	189.95	183.97	**459.02**
2034-35	95.48	212.08	206.05	**513.61**
2035-36	106.94	236.16	230.05	**573.16**
2036-37	118.94	262.66	255.55	**637.14**
2037-38	133.13	291.90	285.06	**710.09**
2038-39	149.19	326.44	317.35	**792.99**
2039-40	167.06	364.09	354.11	**885.26**
2040-41	186.77	405.25	393.85	**985.88**
2041-42	209.21	450.32	439.68	**1099.20**
2042-43	234.75	502.09	489.66	**1226.50**
2043-44	262.91	562.51	548.41	**1373.83**
2044-45	293.55	625.33	612.53	**1531.42**
2045-46	329.19	698.08	680.61	**1707.88**
2046-47	366.13	777.47	757.57	**1901.17**
2047-48	409.40	862.66	842.04	**2114.10**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Goa/ Karnataka to Kundapur section of NH-17 in state of Karnataka from km 93.70.000 to km 183.300 is four lane. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the busy and prominent national highway NH-17 which is main link for traffic on west coast to from Rajasthan, Gujarat, Maharashtra to Kerala. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As Indian economy is poised to grow at 6%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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INFRASTRUCTURE TRUST

KISHANGARH TO GULABPURA SECTION OF NH-79 &NH-79A IN THE STATE OF RAJASTHAN (LENGTH 90 KM)

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

MARCH 2024

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NAVI MUMBAI

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, Six Laning of **Kishangarh** to **Gulabpura** section of NH-79A & NH-79 (length 90.00km) is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s Kishangarh Gulabpura Tollway Ltd.* (Concessionaire) has been awarded the Project for a concession period of 20 years starting from 21st February 2018. The Project has been commissioned and is currently in the operation / maintenance phase. Six laning of project has also been completed in July 2022.

Length of project road is 90.00 Kms. The project road is section of NH-79A & 79 A, which connects Ajmer to Ghat Bilod. Project section of NH-79 passes through the district of Bhiwara and Ajmer.

Project road alignment passes through the small towns of Shreenagar, Nasirabad, Jharwasa, Bandanwara and Bijainagar (Vijay Nagar). The following figure shows alignment of the project road section from Kishangarh to Gulabpura.

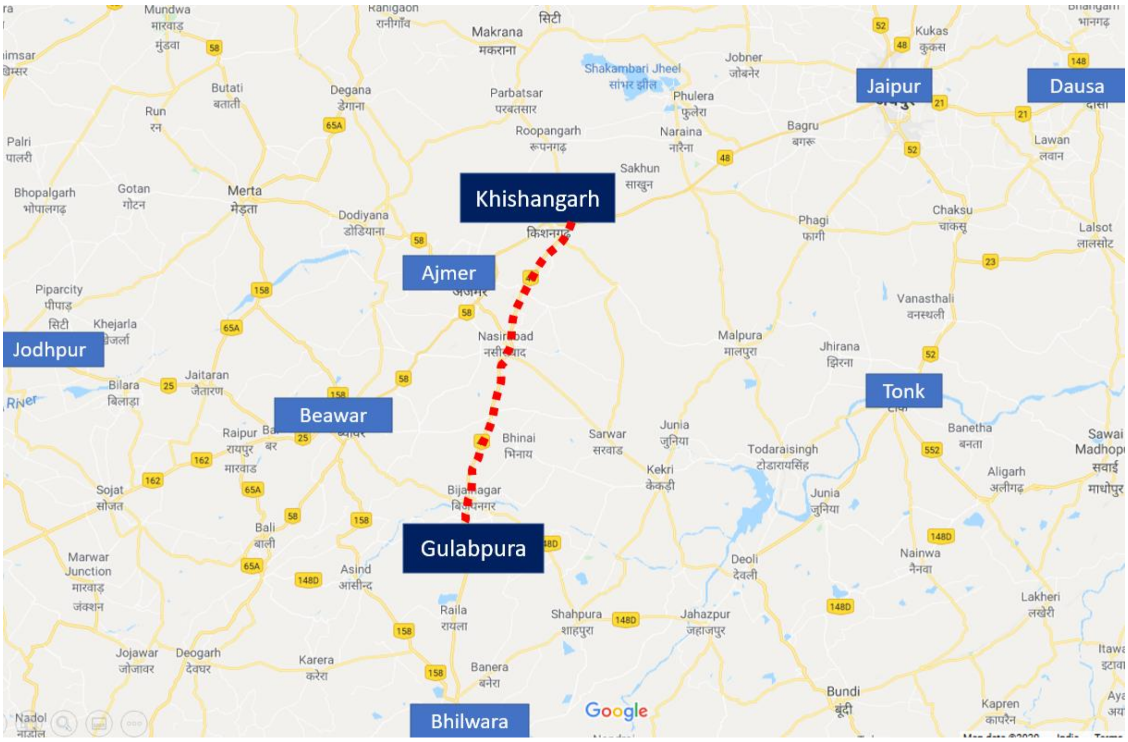

Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study & *Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 79 (NH 79) is an important link for traffic connecting Delhi, Jaipur to Udaipur, Chittorgarh and down south. The project road is the section of the former NH-79A &NH-79 which has now been re-designated as NH-48. The project road section takes off at Kishangarh and ends at Gulabpura, both in the state of Rajasthan. The NH-79A was the section from Kishangarh to Nasirabad and part of NH-79 (Ajmer to Ghata Billod) was the remaining section from Nasirabad to Gulabpura

It is one of the major north-south road connectivity for the traffic from northern states of Haryana, Punjab and Delhi to Industrial and tourist areas of Rajasthan like Jaipur, Chittorgarh, Udaipur and then to Dahod, Ratlam and other parts of Madhya Pradesh.

After renumbering of all national highways by National Highway Authority of India in 2010, the current NH 48 was formed by merging the old NH 8 (Delhi-Mumbai section) and NH 4 (Mumbai-Chennai). National Highway 48 starts at Delhi and terminates at Chennai and goes through Jaipur, Udaipur, Vadodara, Mumbai, Pune and Bengaluru, traversing through six states of India. It has a total length of 2807 km (1744 miles)

2.2 Project Stretch Description

Section of NH-79 from Kishangarh to Gulabpura is part of major transportation link in the area connecting industrial / tourist cities of Jaipur-, Bhilwara, Chittorgarh and Udaipur. Project stretch would be faster connectivity to Udaipur from Jaipur once six laning is complete.

Major mining industries of marble, Zink, felspar, quarts of Udaipur and textile industry of Bhiwara provide are major contributor of commercial traffic on project corridor. Additionally, Jaipur, Ajmer, Udaipur, Chittorgarh and Bhilwara major tourist centers of India. This adds substantial value for passenger traffic on the project corridor section.

Like other parts of India rapid ribbon development is happening around these cities on project highway. This also contributes to sustainable traffic growth.

There is one operative toll plaza at project stretch at Bandanwara at km 61.020. The following figure shows project alignment and toll plaza locations.

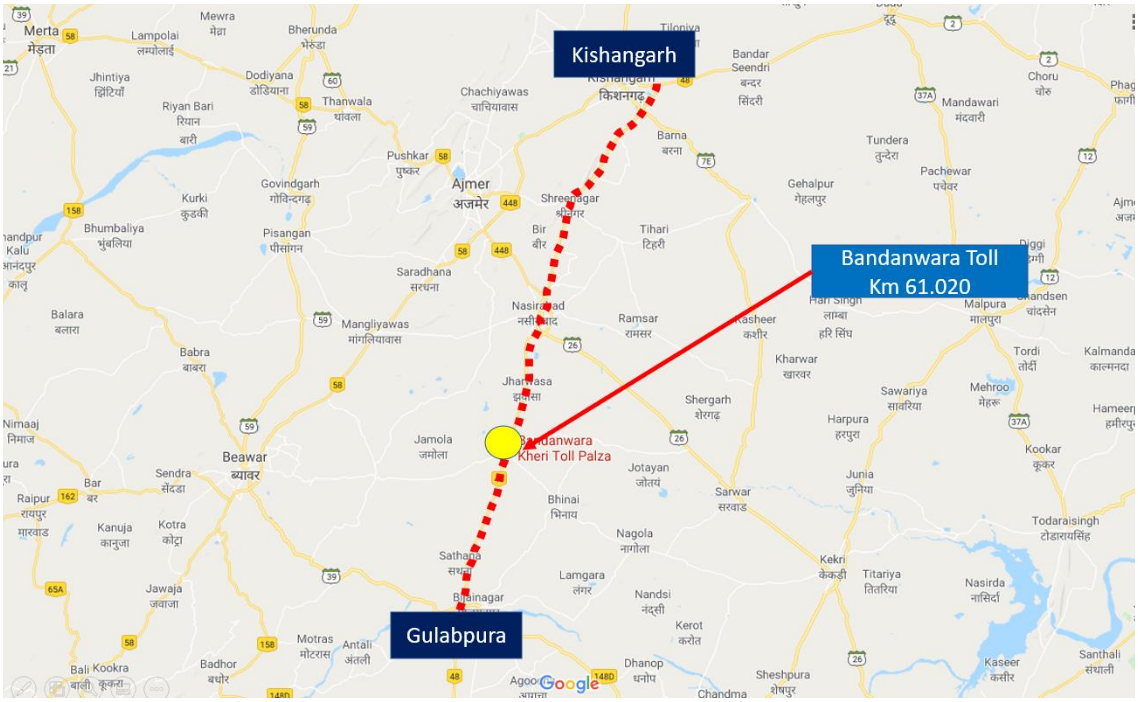

Figure 2-1 : Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is in progress and will be completed soon. The following photographs illustrate the project section along the corridor.

Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza location on Kishangarh – Gulabpura section of NH-79 for year 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22,2022-23 and traffic data from April 2023 to November 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 61.020 Toll Plaza at Bandanwara	AADT for Year 2018-19, 2019-2020 ,2020-2021, 2021-2022, 2022-2023 & Eight	For Year 2018-19, 2019-2020 ,2020-2021, 2021-2022, 2022-2023	For Year 2018-19, 2019-2020 ,2020-2021, 2021-2022, 2022-2023	For Year 2018-19, 2019-2020 ,2020-2021, 2021-2022, 2022-2023 & Eight	For Year 2018-19, 2019-2020 ,2020-2021, 2021-2022, 2022-2023 & Eight

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		month from April 2023 to November 2023	& Eight month from April 2023 to November 2023	& Eight month from April 2023 to November 2023	month from April 2023 to November 2023	month from April 2023 to November 2023

3.2 Classified traffic volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Truck / Bus
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23 and from April 2023 to November 2023.
Since the traffic data available for this update is for only eight months, from April 2023 to November 20223, it may not represent the whole year traffic. Additionally, Udaipur Bypass has been opened recently which is expected to attract more long distance traffic onto corridor. It was expected to be opened in monsoon but got slightly delayed. Hence a, taking above factors into consideration, seasonality factor for balance part of year has been applied to average traffic of current eight months to arrive at Annual Average Daily Traffic of base year 2023-24. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and Annual Average Daily Traffic (AADT) for year 2023-24.

Table 3-3 : Traffic Data at Bandanwara Toll Plaza at Km 61.020

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)-2019-20	Annual Average Daily Traffic (Nos.)-2020-21	Annual Average Daily Traffic (Nos.)-2021-22	Annual Average Daily Traffic (Nos.)-2022-23	Annual Average Daily Traffic (Nos.)-2023-24
1	Car	2572	448	3827	5400	6428
2	Minibus /LCV	1009	326	522	736	868
3	Bus	376	38	337	486	624
4	Truck	1511	264	1756	2375	2803
5	3-Axle Commercial vehicle	2095	318	1805	2045	2188
6	Multi axle	4421	748	4141	4709	5396
7	Oversized Vehicle	19	70	319	296	463
Total		**12003**	**2212**	**12707**	**16046**	**18770**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in “IRC-64-1990: Guidelines for Capacity of Roads in Rural areas”. The adopted passenger car unit values (PCU) are presented in ***Table 3-4.***

Table 3-4 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-5 : Traffic in PCU at Project Stretch Base Year 2019-20, 2020-21, 2021-22, 2022-23 & 2023-24

Toll Plaza Location (Km)	Year	Traffic No	PCU	PCU Index
Bandanwara 61.020	**2019-20**	12003	36011	3.00
	2020-21	2212	6478	2.93

Toll Plaza Location (Km)	Year	Traffic No	PCU	PCU Index
	2021-22	12707	36374	2.86
	2022-23	16046	43739	2.73
	2023-24	18770	50940	2.71

It can be observed from above that project traffic has PCU index 3 which is an indicator of very high proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at four toll plaza locations.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

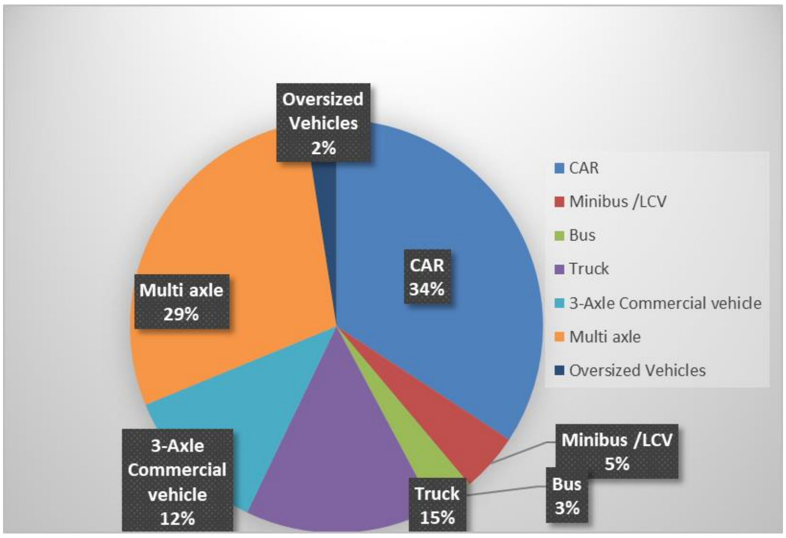

Figure 3-1 : Model Split of Tollable Vehicle

It is observed that car traffic forms about 34% of total traffic at toll plaza locations while multi axle commercial vehicles are about 43% of total traffic. Truck / Bus and LCV share about 18% and 5% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2023-24

Table 3-6 : Journey Type Bifurcation of Traffic at Bandanwara TP KM 61.020

Sr. No	Type	Traffic Volume (Nos.) 2023-24
1	Single Journey	14380
2	Return Journey	3768
3	Local Commercial Single Journey	598
4	Monthly Pass Local	7
5	Monthly Pass	18

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 77%. Return journey component is 20%. The number of Local Commercial Single Journey is 3% and Monthly Pass Local 0% at Bandanwara toll plaza.

It is observed that the project corridor demonstrates pattern of single journey dominated mix of traffic at stretch which is typical of major national highways with high component of long-distance traffic.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data

3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch has toll application history from last few years, and it can be assumed that project traffic is settled. At the local level there is no potential competing route bypassing toll plaza between. At regional level, there can be two alternates for Udaipur traffic after Kishangarh. One via project road (Kishangarh – Bhiwara- Chittorgarh- Udaipur) and one via Ajmer, Beawer and Rajsamand.
The following maps show these routes in relation to project stretch at regional level.

Figure 4-1 : Alternate route at regional level.

It can be observed that the project highway forms one of the main spines of the corridor between Kishangarh / Jaipur and Chittorgarh. Traffic on project road is now settled and it can be assumed as dedicated traffic on project road for logistic obligations.

At regional level for Udaipur traffic alternate route is faster and traffic is already using this alternate.

With six laning now nearing completion, the project stretch would become slightly more attractive due to the improved level of service. In such a case further diversion of traffic from the project road is not envisaged.

The following table provide summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Jaipur – Ajmer-Udaipur	Alternate Route	395	61	6 Hr 23 Min	At present alternate route via Ajmer is a bit faster but after completion of six laning level of service would increase at project road as well
	Jaipur- Bhilwara - Chittorgarh- Udaipur	Project Road	398	51	6 Hr 58 Min	

It may be noted that since the project highway has already been commissioned and has a tolling history, the current traffic traversing the project corridor already factors in traffic diversion (if any) that may have taken place. Further after completion of six laning, level of service would improve on project corridor, and this would create favorable conditions for traffic. Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. It is expected that there would be some additional traffic on project corridor once six lane is completed due to improvement in level of service.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Kishangarh to Gulabpur section of NH-79 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = *k x Log (EI) + A*

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across the state of Rajasthan. Toll plaza at Bandanwara is in the state of Rajasthan but it has influence of Gujarat also. For elasticity calculations, working data from Rajasthan and Gujarat has been analyzed.

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-1 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	57192	591069	4.76	5.77		
2013	58441	659542	4.77	5.82	2%	
2014	61053	733916	4.79	5.87	4%	
2015	64496	814079	4.81	5.91	6%	
2016	68565	899307	4.84	5.95	6%	
2017	71394	988391	4.85	5.99	4%	4.55%

Regression analysis of same is given in figure below.

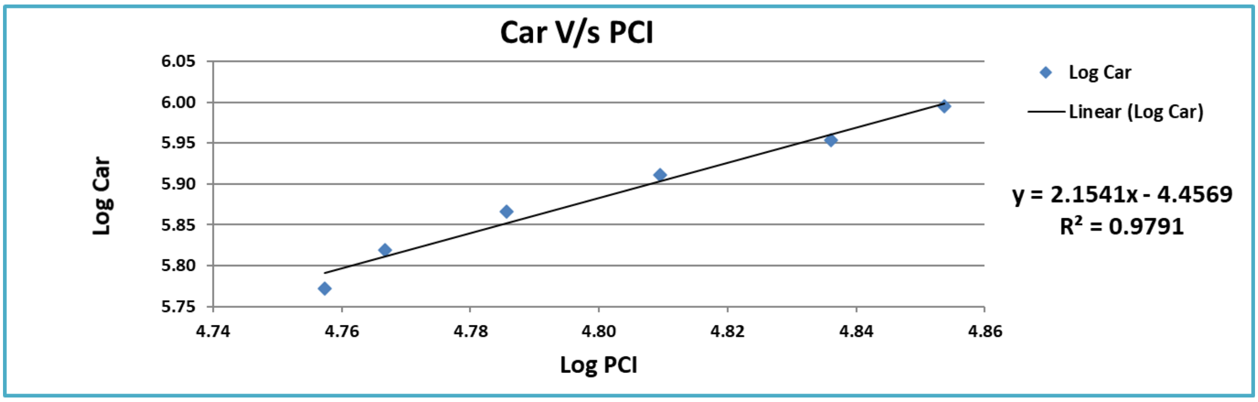

Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-2 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	68548437	83345	7.84	4.92		
2013	69783885	88616	7.84	4.95	2%	
2014	71016445	93892	7.85	4.97	2%	
2015	72245688	97650	7.86	4.99	2%	
2016	73471198	102818	7.87	5.01	2%	
2017	74692571	108680	7.87	5.04	2%	1.73%

Regression analysis of same is given in figure below.

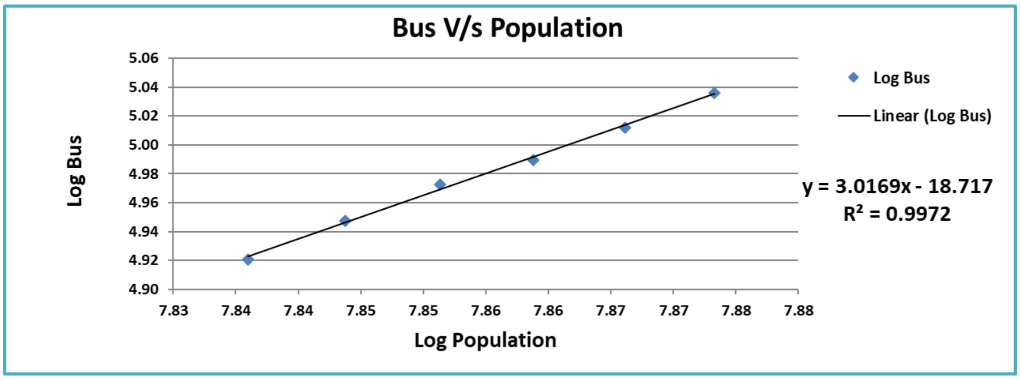

Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Rajasthan

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth
2012	395331	69509	5.60	4.84		
2013	409802	76396	5.61	4.88	4%	
2014	434292	33379	5.64	4.52	6%	
2015	465408	91787	5.67	4.96	7%	
2016	501922	99763	5.70	5.00	8%	6.16%

The following figure depicts regression analysis and extrapolation.

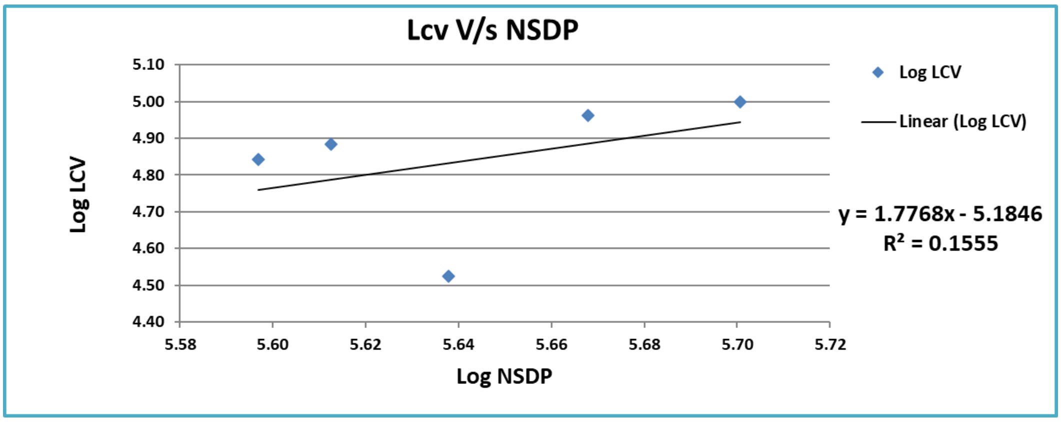

Figure 5-3 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Rajasthan.

The following figure depicts regression analysis and extrapolation.

Table 5-4 : Goods Traffic Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth
2012	395331	362028	5.60	5.56		
2013	409802	401983	5.61	5.60	4%	
2014	434292	434379	5.64	5.64	6%	
2015	465408	472365	5.67	5.67	7%	
2016	501922	517604	5.70	5.71	8%	
2017	530172	561158	5.72	5.75	6%	6.06%

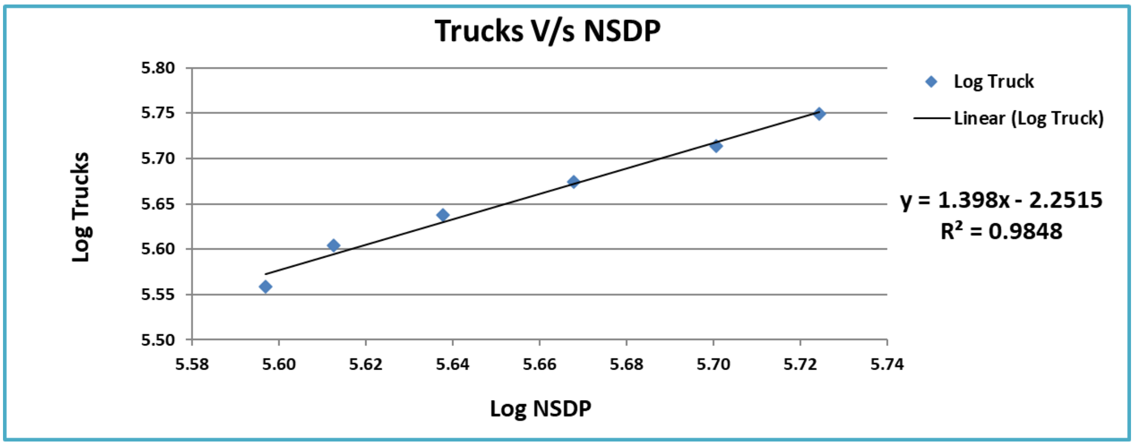

Figure 5-4 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Rajasthan.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-5 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Rajasthan	Car/Jeep	PCI	y = 2.1541x + -4.4569	R^2 = 0.9791	2.1541	4.55%	9.79%	Good Regression
	Bus	Population	y = 3.0169x - -18.7174	R^2 = 0.9972	3.0169	1.73%	5.22%	Good Regression
	LCV	NSDP	y = 1.7768x - -5.1846	R^2 = 0.1555	1.7768	6.16%	10.95%	Poor Regression
	Truck	NSDP	y = 1.398x - -2.2515	R^2 = 0.9848	1.3980	6.06%	8.46%	Good Regression

Table 5-6 : Per Capita Income Vs Car Gujarat

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	87481	1411898	4.94	6.15		
2013	96683	1602129	4.99	6.20	11%	
2014	102589	1771298	5.01	6.25	6%	
2015	111370	2008748	5.05	6.30	9%	
2016	120683	2260084	5.08	6.35	8%	
2017	129738	2527537	5.11	6.40	8%	8.21%

Regression analysis of same is given in figure below.

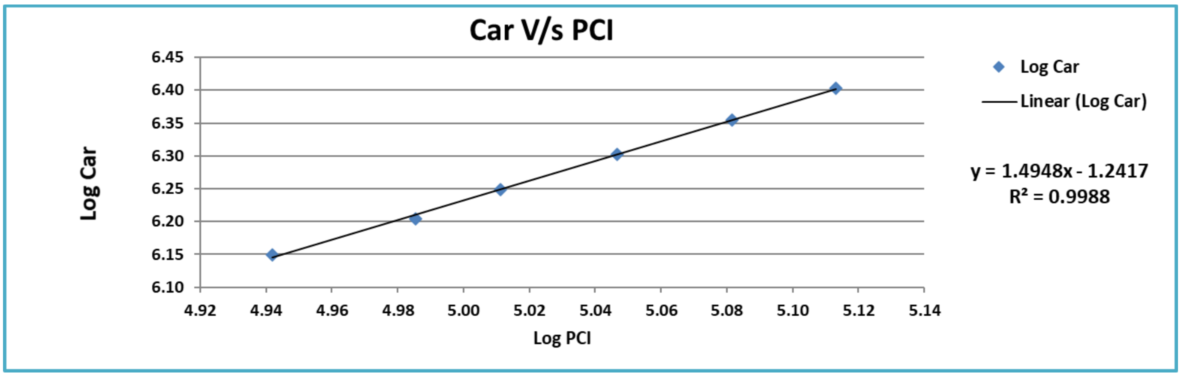

Figure 5-5 : Regression and Elasticity PCI vs. Car – Extrapolation Gujarat

Table 5-7 : Population Vs Bus Gujarat

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	60439692	67546	7.78	4.83		
2013	61563037	70615	7.79	4.85	2%	
2014	62684375	72998	7.80	4.86	2%	
2015	63803304	76435	7.80	4.88	2%	
2016	64919427	82734	7.81	4.92	2%	
2017	66032362	74855	7.82	4.87	2%	1.79%

Regression analysis of same is given in figure below.

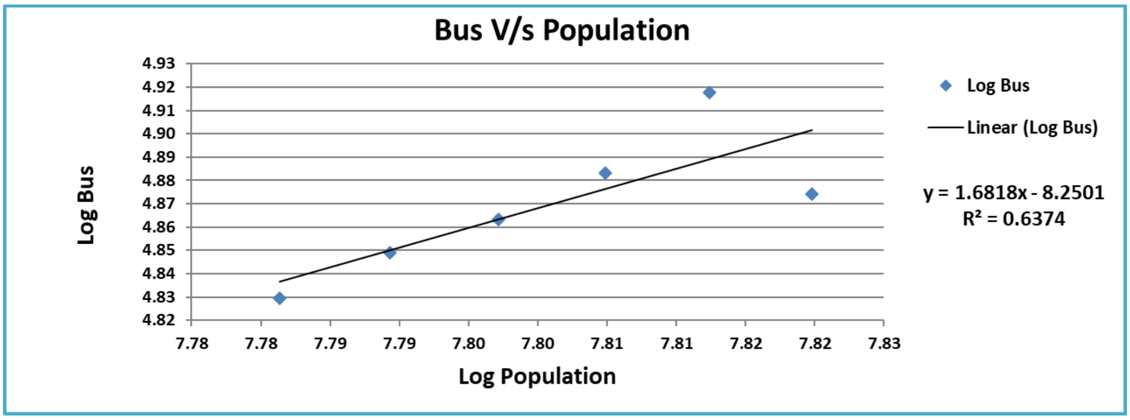

Figure 5-6 : Regression and Elasticity Population vs. Bus – Extrapolation Gujarat

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Gujarat

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth
2012	532809	448958	5.73	5.65		
2013	596659	499277	5.78	5.70	12%	
2014	641489	542918	5.81	5.73	8%	
2015	705629	589984	5.85	5.77	10%	
2016	774775	633599	5.89	5.80	10%	9.82%

The following figure depicts regression analysis and extrapolation.

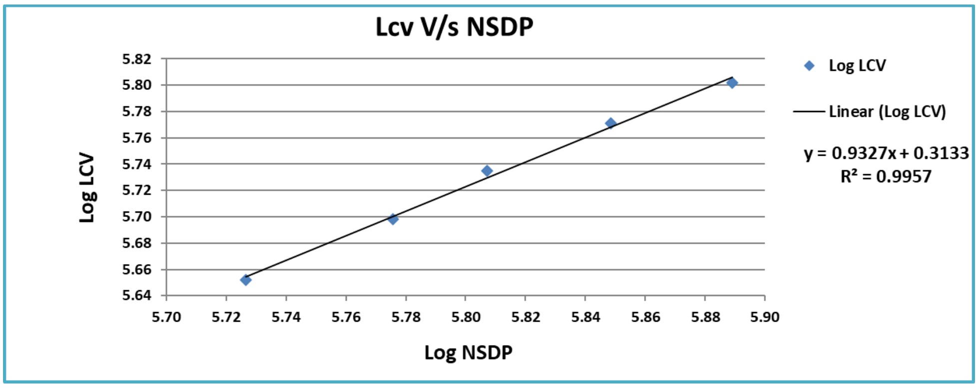

Figure 5-7 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Gujarat.

The following figure depicts regression analysis and extrapolation.

Table 5-9 : Goods Traffic Vs NSDP Gujarat

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth
2012	532809	301533	5.73	5.48		
2013	596659	319207	5.78	5.50	12%	
2014	641489	332185	5.81	5.52	8%	
2015	705629	352225	5.85	5.55	10%	
2016	774775	375265	5.89	5.57	10%	
2017	843930	396061	5.93	5.60	9%	9.64%

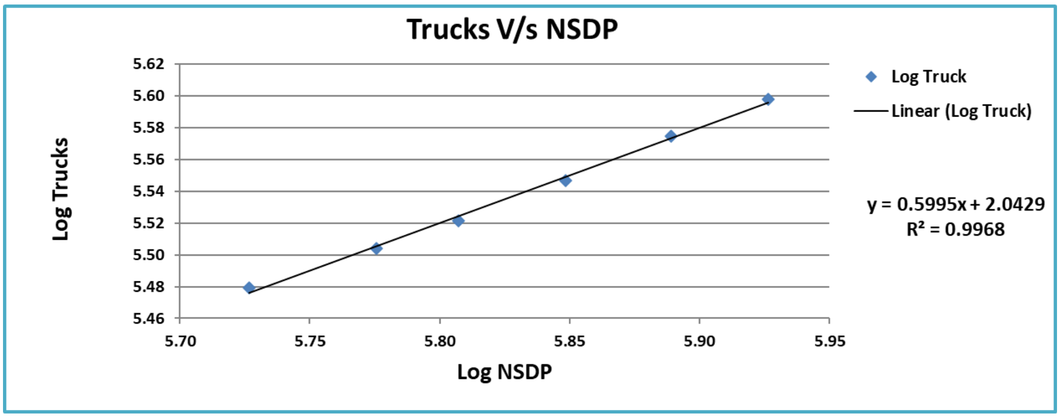

Figure 5-8 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Gujarat.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-10 : Summary Regression Analysis Gujarat

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Gujarat	Car/Jeep	PCI	y = 1.4948x + -1.2417	R^2 = 0.9988	1.4948	8.21%	12.27%	Good Regression
	Bus	Population	y = 1.6818x - -8.2501	R^2 = 0.6374	1.6818	1.79%	3.00%	Fair Regression
	LCV	NSDP	y = 0.9327x - 0.3133	R^2 = 0.9957	0.9327	9.82%	9.16%	Good Regression
	Truck	NSDP	y = 0.5995x - 2.0429	R^2 = 0.9968	0.5995	9.64%	5.78%	Good Regression

The economic model for predicting growth is a good tool, however other local, regional, and national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trends of growth. Project stretch of Kishangarh to Gulabpura is under tolling operation with current concessionaire and has two year of tolling history from 2018-19. As traffic data is available with the project concessionaire of year two years, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

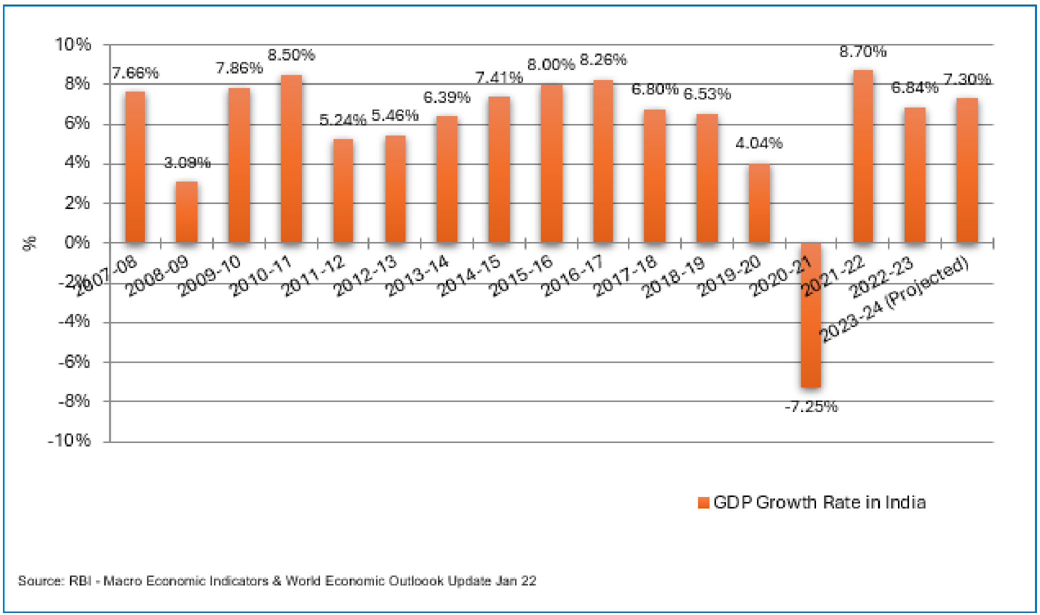

Figure 5-9 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. The World Economic Outlook update also has predicted a growth rate of about 7.5 % in the year 2022-23.

5.6 Developments along and around the Project Corridor & State

This Highway passes through Ajmer district of Rajasthan, having Industrial Areas of RIICO Kishangarh and Silora. There are Large Scale Industries of Cement, Marble & Granite and Medium Scale Industries of engineering and instrumentation in this area. Asset primarily serves traffic travelling between Delhi, Rajasthan, Gujarat and Maharashtra. It is observed that the vehicle distribution to be dominated by heavy vehicles. We further noticed several textile industries and marble/granite industries bordering the Asset. Udaipur serves as a big tourism hub as well as a consumption centre which also results in traffic feeding into the demand being generated.

In addition, Chittorgarh has 4 major cement plants located in Chanderiya and Nimbahera villages. There is a regular movement of Cement bulkers to and from these locations along asset. Chanderiya Lead-Zinc Smelter, is the one of the largest zinc-lead smelting complexes in the world, is also located in Chittorgarh. Bhilwara is home to the textile industry and the only centre in the country producing insulation bricks. Mining is another major sector for large scale mining of sandstone, soap stone feldspar, quartz, mica China clay and granite. Also, Iron Ore, Led, and Zinc are mined and processed in Bhilwara.

growth of Rajasthan has been comparable to the national average economic growth. Rajasthan is rich in natural resources and benefits from its strategic geographic location in India. The state is pre-eminent in quarrying, mining in India and has been a leader in crude oil extraction over the past the few years. Moreover, Rajasthan is also a relevant tourism attractor in India. Considering the scenario, it may be assumed that the traffic growth on the project highway would remain high and there are minimal risks in terms of growth.

Table 5-11 : GDP of India, UP and other important states

Year	India (GDP)	Bihar	Haryana	Madhya Pradesh	Maharashtra	Odisha	Punjab	Rajasthan	Uttar Pradesh	Uttarakhand	West Bengal	Delhi
1980-81	12336	514	357	623	1464	529	504	560	1631	138	830	269
1981-82	13030	543	371	639	1498	528	551	607	1670	141	808	291
1982-83	13411	548	394	668	1556	497	568	620	1800	152	840	328
1983-84	14464	601	402	702	1654	597	578	761	1871	158	939	320
1984-85	15037	658	418	668	1675	569	623	706	1900	161	964	333
1985-86	15663	672	493	726	1807	635	670	704	1975	167	1005	386
1986-87	16339	725	493	694	1832	643	694	771	2060	174	1045	411
1987-88	16917	685	484	789	1955	623	730	718	2154	182	1101	447
1988-89	18635	772	602	847	2159	754	769	1014	2434	206	1148	486
1989-90	19778	759	610	865	2515	805	834	993	2502	212	1188	531
1990-91	20824	831	674	987	2629	668	849	1149	2651	224	1251	553
1991-92	21122	784	688	916	2620	753	888	1061	2662	225	1349	638
1992-93	22254	737	688	983	3017	740	930	1220	2690	228	1389	660
1993-94	23519	755	719	1088	3349	788	970	1121	2757	233	1490	705
1994-95	25023	842	771	1107	3414	826	995	1325	2901	254	1594	790
1995-96	26846	712	787	1174	3791	864	1032	1374	2995	251	1713	804
1996-97	28987	893	879	1252	3941	804	1107	1535	3327	267	1832	915
1997-98	30234	850	887	1318	4158	920	1137	1721	3292	270	1985	1063
1998-99	32255	904	934	1405	4324	948	1203	1797	3316	274	2112	1116
1999-00	34837	950	1002	1552	4735	1008	1267	1801	3440	274	2264	1170
2000-01	36282	1106	1081	1426	4589	982	1309	1743	3511	308	2343	1215
2001-02	38236	1043	1165	1528	4751	1042	1326	1941	3575	323	2512	1262
2002-03	39719	1175	1236	1449	5079	1034	1348	1708	3690	353	2600	1359
2003-04	42883	1099	1358	1611	5471	1185	1433	2251	3885	381	2753	1433
2004-05	45906	1238	1475	1664	5948	1340	1504	2196	4079	431	2936	1588
2005-06	50257	1207	1608	1748	6810	1399	1577	2344	4317	492	3121	1752
2006-07	55066	1416	1791	1907	7748	1574	1748	2620	4660	551	3366	1969
2007-08	60199	1489	1931	1997	8650	1708	1899	2739	4959	648	3627	2191
2008-09	64248	1716	2080	2250	8786	1837	2004	2969	5336	716	3774	2464
2009-10	69769	1798	2340	2463	9634	1852	2132	3142	5668	839	4067	2667
2010-11	75987	2073	2498	2592	10732	1968	2270	3614	6120	927	4313	2888
2011-12	81069	2285	2712	2824	11222	2042	2392	3953	6451	1020	4471	3147
2012-13	85463	2369	2894	3069	11842	2163	2518	4098	6736	1095	4838	3342
2013-14	90636	2469	3142	3226	12671	2331	2675	4343	7075	1178	5247	3565
2014-15	97121	2557	3314	3394	13322	2359	2777	4656	7297	1257	5633	3882
2015-16	105033	2749	3612	3597	14417	2557	2926	4981	7894	1355	-	4291
2016-17	112476	3033	3927	4129	15744	2828	3095	5352	8457	1448	-	4658
2017-18	119762	-	-	4432	-	3029	-	5736	9011	1547	-	5035
Growth 1981-2018	6.34	5.05	6.88	5.44	6.82	4.83	5.17	6.49	4.73	6.75	5.79	8.24
Growth 1994-2018	7.02	6.23	7.66	6.03	6.96	5.77	5.17	7.04	5.06	8.20	6.54	8.53

Growth 2000-2018	7.10	7.07	8.37	6.00	7.32	6.30	5.40	6.65	5.50	10.10	6.27	8.45

5.6.1 Industrial Units along Project Corridor

There are a number of medium and big size industrial establishments along the project corridor. The following figure shows the spread of these industries along project road.

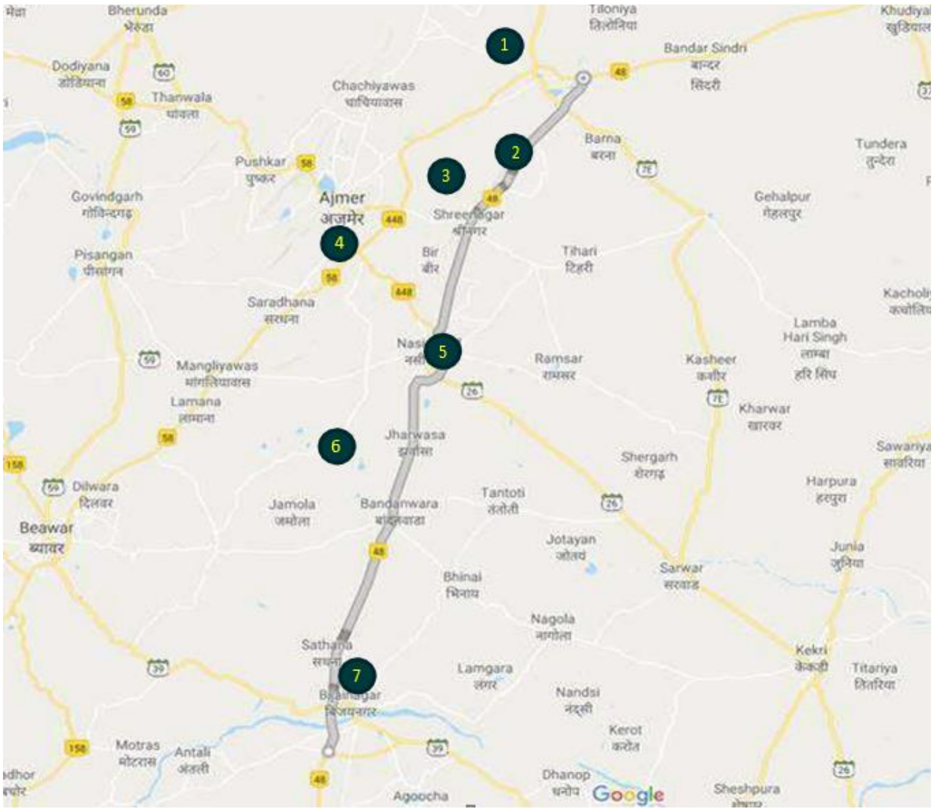

Figure 5-10 : Industrial Units along project corridor.

1. RIICO Industrial Area **Kishangarh** (Marbel & Cement Manufacturing Industries)
2. RIICO **Silora** (Wire Product, Ice Factory)
3. Welding Wire & Plastic Manufacturing Industries
4. Industrial Process Measurement & Control Instruments
5. FMCG & Quartz Manufacturers
6. Brick Manufacturers
7. **Bijainnagar** (Cattle Feed Products Manufacturer – Kapila)

The presence of these units promotes sustainable traffic in the project corridor.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as below. The rate of growth is moderate in light of overall regional trends. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, the rate of growth diminishes. The same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-12 : Recommended Growth Rates Optimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.26%	8.70%	8.16%	7.62%	7.58%	7.03%
Bus	4.38%	4.12%	3.88%	3.64%	3.57%	3.33%
LCV	3.56%	3.74%	3.92%	4.10%	4.27%	4.44%
2- Axle	4.39%	3.95%	3.52%	3.09%	2.86%	2.41%
3 - Axle	5.43%	4.88%	4.33%	3.80%	3.67%	3.08%
4 to 6 Axle	6.46%	5.80%	5.15%	4.50%	4.27%	3.58%
7 and Above Axle	6.46%	5.80%	5.15%	4.50%	4.27%	3.58%

Table 5-13 : Recommended Growth Rates Pessimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.76%	8.20%	7.66%	7.12%	7.08%	6.53%
Bus	3.88%	3.62%	3.38%	3.14%	3.07%	2.83%
LCV	3.06%	3.24%	3.42%	3.60%	3.77%	3.94%
2- Axle	3.89%	3.45%	3.02%	2.59%	2.36%	1.91%
3 - Axle	4.93%	4.38%	3.83%	3.30%	3.17%	2.58%
4 to 6 Axle	5.96%	5.30%	4.65%	4.00%	3.77%	3.08%
7 and Above Axle	5.96%	5.30%	4.65%	4.00%	3.77%	3.08%

Table 5-14 : Recommended Growth Rates Most Likely

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.01%	8.45%	7.91%	7.37%	7.33%	6.78%
Bus	4.13%	3.87%	3.63%	3.39%	3.32%	3.08%
LCV	3.31%	3.49%	3.67%	3.85%	4.02%	4.19%
2- Axle	4.14%	3.70%	3.27%	2.84%	2.61%	2.16%
3 - Axle	5.18%	4.63%	4.08%	3.55%	3.42%	2.83%
4 to 6 Axle	6.21%	5.55%	4.90%	4.25%	4.02%	3.33%
7 and Above Axle	6.21%	5.55%	4.90%	4.25%	4.02%	3.33%

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza Chainage KM 61.02 (Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	6428	868	624	2803	2188	5396	463	18770	50940
2024-25	7024	898	651	2926	2308	5744	493	20044	54093
2025-26	7636	931	678	3042	2420	6077	522	21306	57148
2026-27	8300	965	705	3162	2537	6429	552	22650	60374
2027-28	9022	1000	734	3287	2661	6801	584	24089	63801
2028-29	9807	1037	763	3416	2790	7195	618	25626	67428
2029-30	10661	1076	794	3551	2925	7612	654	27273	71282
2030-31	11531	1117	825	3676	3051	8003	688	28891	74972
2031-32	12471	1160	856	3805	3183	8415	723	30613	78864
2032-33	13488	1205	889	3939	3320	8848	760	32449	82976
2033-34	14588	1252	923	4077	3463	9303	799	34405	87314
2034-35	15778	1301	958	4220	3612	9781	840	36490	91894
2035-36	16980	1354	993	4350	3748	10221	878	38524	96230
2036-37	18274	1409	1029	4484	3890	10681	917	40684	100788
2037-38	19667	1466	1066	4622	4037	11162	958	42978	105581
2038-39	21167	1525	1104	4765	4189	11665	1001	45416	110626
2039-40	22780	1587	1144	4912	4348	12191	1046	48008	115939
2040-41	24507	1654	1184	5052	4507	12712	1090	50706	121326
2041-42	26229	1727	1223	5174	4646	13166	1129	53294	126276
2042-43	28071	1803	1263	5299	4789	13637	1169	56031	131456

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Chainage KM 61.02 (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	6428	868	624	2803	2188	5396	463	18770	50940
2024-25	6992	895	648	2912	2296	5718	491	19952	53843
2025-26	7566	924	671	3012	2396	6021	517	21107	56610
2026-27	8187	954	694	3116	2500	6340	545	22336	59531

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2027-28	8858	985	719	3224	2609	6676	574	23645	62617
2028-29	9584	1017	744	3335	2723	7030	604	25037	65869
2029-30	10370	1049	771	3450	2841	7402	636	26519	69301
2030-31	11164	1084	796	3554	2950	7746	666	27960	72544
2031-32	12019	1121	823	3661	3063	8106	697	29490	75955
2032-33	12939	1159	850	3771	3180	8483	729	31111	79535
2033-34	13929	1198	879	3885	3301	8876	763	32831	83297
2034-35	14994	1238	908	4002	3427	9288	798	34655	87249
2035-36	16061	1283	936	4106	3540	9659	830	36415	90932
2036-37	17204	1329	965	4212	3656	10046	863	38275	94787
2037-38	18429	1376	995	4321	3776	10448	897	40242	98822
2038-39	19741	1425	1026	4432	3900	10866	933	42323	103048
2039-40	21147	1475	1058	4547	4028	11300	970	44525	107474
2040-41	22644	1530	1090	4654	4155	11725	1006	46804	111926
2041-42	24122	1589	1121	4743	4262	12085	1037	48959	115933
2042-43	25696	1651	1152	4834	4372	12456	1069	51230	120109

Table 6-3 : Total Tollable Traffic @ Toll Plaza 3- Chainage KM 61.02 (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	6428	868	624	2803	2188	5396	463	18770	50940
2024-25	7007	896	649	2919	2301	5731	492	19995	53962
2025-26	7599	927	674	3027	2407	6049	519	21202	56870
2026-27	8242	959	699	3140	2518	6385	548	22491	59950
2027-28	8939	992	726	3256	2634	6739	578	23864	63202
2028-29	9694	1026	753	3376	2755	7112	610	25326	66634
2029-30	10513	1061	782	3501	2882	7506	644	26889	70275
2030-31	11343	1100	810	3616	2999	7873	676	28417	73739
2031-32	12240	1140	839	3734	3121	8259	709	30042	77388
2032-33	13208	1181	869	3856	3248	8663	744	31769	81230
2033-34	14252	1224	900	3982	3380	9087	780	33605	85276
2034-35	15378	1268	932	4111	3517	9531	818	35555	89531
2035-36	16512	1316	963	4228	3642	9936	853	37450	93536
2036-37	17729	1366	995	4348	3771	10358	889	39456	97732
2037-38	19036	1418	1028	4472	3904	10798	927	41583	102138
2038-39	20440	1472	1063	4599	4042	11257	966	43839	106764
2039-40	21948	1528	1099	4729	4185	11735	1007	46231	111618
2040-41	23557	1588	1135	4853	4328	12207	1047	48715	116530
2041-42	25154	1654	1170	4958	4451	12612	1082	51081	120995
2042-43	26859	1722	1206	5065	4577	13031	1118	53578	125657

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Gulabpura - Chittorgarh project, the Target Date and Target Traffic are defined as under:

Target Date - 1st May 2026

Target Traffic - 76236 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. The probable extension of the concession period is estimated according to article 29 of the concession agreement which comes to about three years. Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76236	60007	-21%	32%	20%	20	4.0

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76236	60441	-21%	31%	20%	20	4.0

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76236	59586	-22%	33%	20%	20	4.0

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Kishangarh- Gulabpura section of NH-79 is based on the old toll policy. As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued for 50 trips in month at 2/3d rate.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
   a) Local Car Jeep Van I - Rs. 275 per
   b) Local Commercial Vehicles at 50% rate for single journey

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A} - \text{WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

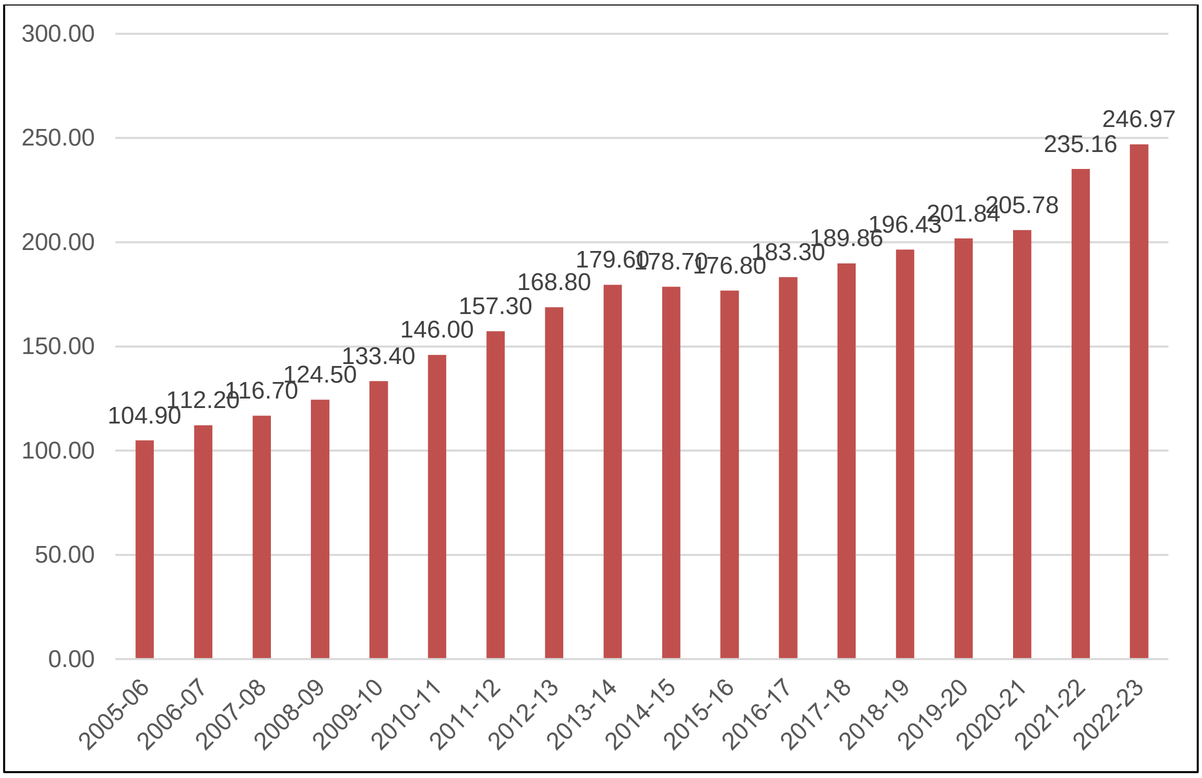

Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey @ Chainage KM 61.02

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles
2023-24	140	225	475	475	515	745	905
2024-25	145	230	485	485	530	760	925
2025-26	150	245	510	510	555	800	975
2026-27	160	255	535	535	585	840	1025
2027-28	165	270	565	565	615	885	1075
2028-29	175	285	590	590	645	930	1130
2029-30	185	295	620	620	680	975	1190
2030-31	195	310	655	655	715	1025	1250
2031-32	205	330	690	690	750	1080	1315
2032-33	215	345	725	725	790	1135	1380
2033-34	225	365	760	760	830	1195	1455
2034-35	235	380	800	800	875	1255	1530
2035-36	250	405	845	845	920	1325	1610
2036-37	260	425	890	890	970	1395	1695
2037-38	275	445	935	935	1020	1465	1785
2038-39	290	470	985	985	1075	1545	1880
2039-40	305	495	1040	1040	1130	1625	1980
2040-41	325	520	1095	1095	1195	1715	2085
2041-42	340	550	1150	1150	1255	1805	2200
2042-43	360	580	1215	1215	1325	1905	2320

Table 7-3 : Toll Rates for Return Journey @ Chainage KM 61.02

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles
2023-24	210	340	710	710	775	1115	1360
2024-25	215	350	730	730	795	1145	1390
2025-26	225	365	765	765	835	1200	1460
2026-27	240	385	805	805	875	1260	1535
2027-28	250	405	845	845	920	1325	1615
2028-29	260	425	890	890	970	1395	1695
2029-30	275	445	935	935	1020	1465	1780
2030-31	290	470	980	980	1070	1540	1875
2031-32	305	495	1030	1030	1125	1620	1970
2032-33	320	520	1085	1085	1185	1705	2075
2033-34	340	545	1140	1140	1245	1790	2180
2034-35	355	575	1200	1200	1310	1885	2295
2035-36	375	605	1265	1265	1380	1985	2415
2036-37	395	635	1330	1330	1455	2090	2545

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles
2037-38	415	670	1405	1405	1530	2200	2680
2038-39	435	705	1475	1475	1610	2315	2820
2039-40	460	745	1555	1555	1700	2440	2970
2040-41	485	785	1640	1640	1790	2570	3130
2041-42	510	825	1730	1730	1885	2710	3300
2042-43	540	870	1820	1820	1985	2855	3480

Table 7-4 : Toll Rates for Monthly Pass Local@ Chainage KM 61.02

Year	Car	Minibus /LCV
2023-24	330	330
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845

Table 7-5 : Toll Rates for Monthly Pass @ Chainage KM 61.02

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2023-24	4670	7545	15805	15805	17240	24785	30170
2024-25	4785	7730	16195	16195	17665	25395	30915
2025-26	5025	8120	17010	17010	18555	26675	32475
2026-27	5280	8530	17870	17870	19495	28025	34115
2027-28	5550	8960	18780	18780	20485	29445	35850
2028-29	5830	9420	19735	19735	21530	30950	37675
2029-30	6130	9900	20745	20745	22630	32530	39605
2030-31	6445	10410	21810	21810	23795	34205	41640
2031-32	6775	10950	22940	22940	25025	35970	43790

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2032-33	7130	11515	24130	24130	26320	37840	46065
2033-34	7500	12115	25385	25385	27695	39810	48465
2034-35	7895	12750	26715	26715	29145	41890	51000
2035-36	8310	13420	28120	28120	30675	44095	53680
2036-37	8745	14130	29600	29600	32295	46420	56515
2037-38	9210	14875	31170	31170	34005	48885	59510
2038-39	9700	15670	32830	32830	35815	51485	62680
2039-40	10220	16505	34585	34585	37730	54240	66030
2040-41	10765	17395	36445	36445	39755	57150	69570
2041-42	11345	18330	38405	38405	41900	60230	73320
2042-43	11960	19320	40485	40485	44165	63485	77285

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2042-43 starting from the year 2023-24 are shown in tables below.

Table 7-6 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1
2023-24	284.86
2024-25	308.48
2025-26	341.91
2026-27	379.86
2027-28	422.96
2028-29	467.81
2029-30	519.21
2030-31	574.24
2031-32	637.17
2032-33	702.15
2033-34	776.35
2034-35	857.54
2035-36	950.02
2036-37	1042.60
2037-38	1147.37
2038-39	1265.47
2039-40	1398.62
2040-41	1539.95
2041-42	1683.12

Year	TP-1
2042-43	1847.98

Table 7-7 : Toll Revenue Pessimistic Scenario (Rs. Crores)

Year	TP-1
2023-24	284.86
2024-25	307.07
2025-26	338.70
2026-27	374.49
2027-28	415.03
2028-29	456.90
2029-30	504.74
2030-31	555.54
2031-32	613.47
2032-33	672.80
2033-34	740.39
2034-35	813.96
2035-36	897.41
2036-37	980.25
2037-38	1073.61
2038-39	1178.48
2039-40	1296.18
2040-41	1420.21
2041-42	1544.82
2042-43	1688.10

Table 7-8 : Toll Revenue Most Likely Scenario (Rs. Crores)

Year	TP-1
2023-24	284.86
2024-25	307.73
2025-26	340.25
2026-27	377.14
2027-28	418.95
2028-29	462.25
2029-30	511.82
2030-31	564.70
2031-32	625.04
2032-33	687.09
2033-34	757.91
2034-35	835.13
2035-36	923.02
2036-37	1010.61
2037-38	1109.48
2038-39	1220.72
2039-40	1345.89

Year	TP-1
2040-41	1478.25
2041-42	1611.83
2042-43	1765.48

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Kishangarh to Gulabpura section of NH-79 in state of Rajasthan is nearing completion of six laning. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the busy and prominent national highway NH-79 which connects Kishangarh to Udaipur via Bhiwala and Chittorgarh. There are large number of townships, industrial corridors and other business establishments coming up along the project corridor. As discussed, the dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give a positive impact to traffic flow on the project. The following can be considered as major outcomes of the study.

a) There is a good amount of tollable traffic running on the project.

b) Project corridor has potential to witness traffic growth @ 7-8% annually in near future due to various development in area and overall development of economy.

c) The Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on the above it can be considered a stable healthy project from the traffic and revenue point of view.

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INFRASTRUCTURE TRUST

SOLAPUR TO YEDISHI SECTION OF NH 211 IN THE STATE OF MAHARASHTRA (KM 0.000 TO KM 100.000)

TTRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

MARCH 2024

GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under various NHDP Phases.

The project under consideration, Four Laning of **Solapur** to **Yedeshi** section of NH-211 from km 0.000 to km 100.000 in the state of Maharashtrais one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s Solapur Yedeshi Tollway Ltd*. (Concessionaire) has been awarded the Project for a concession period of 29 years starting from appointed date of 21st January2015.COD was achieved for part length of project on 15th October 2019 and Tolling Operation on Project started for full length.

Project road section from Solapur to Yedeshi is part of important north-south connectivity. It connects Karnataka, southern parts of Maharashtra and other southern states to Solapur, Aurangabad, Dhule and then northern parts of India.

The following figure shows the project road alignment.

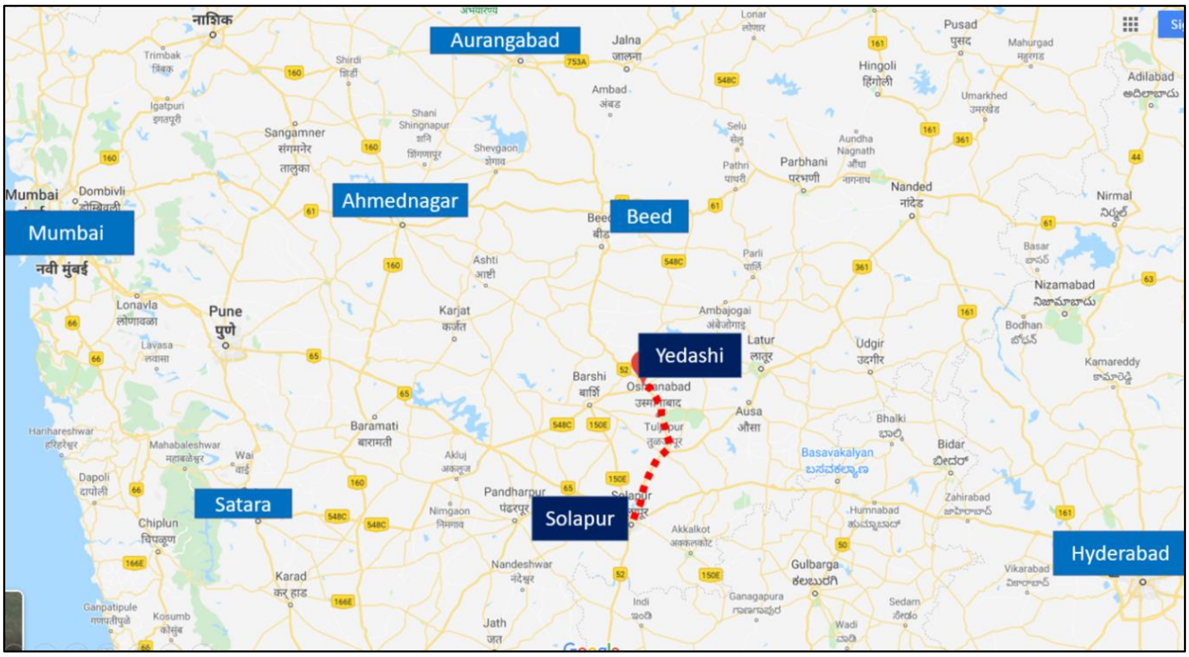

Figure 1-1: Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study &*Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

NH-211 is an important national highway of Maharashtra. It connects northern Karnataka to Marathwada region of Maharashtra.

Solapur, the textile and sugar belt of Maharashtra, Jalna, India’s first dry port, Aurangabad fall in project corridor. Bidkin, Shendre areas which are coming up with mega green field Industrial smart city of 10000 acre at Bidkin and Shendra in Maharashtra also fall in influence zone of project corridor.

2.2 Project Stretch Description

The Project highway from Solapur to Yedeshi border from Km 0.000 to km 100.00 has been widened to four lanes as per schedules.

Project road forms part of very important transportation corridor which works as gateway to Karnataka and rest of south India for Marathwada region of Maharashtra. Though it connects Solapur – Dhule but forms important transportation link for traffic from Vijapur, Hubli and other parts of north Karnataka to Aurangabad, Jalna, Beed and other places in Marathwada region. Project has two toll plazas at Tamamwadi and Yedeshi.

The following figure shows project alignment and toll plaza locations.

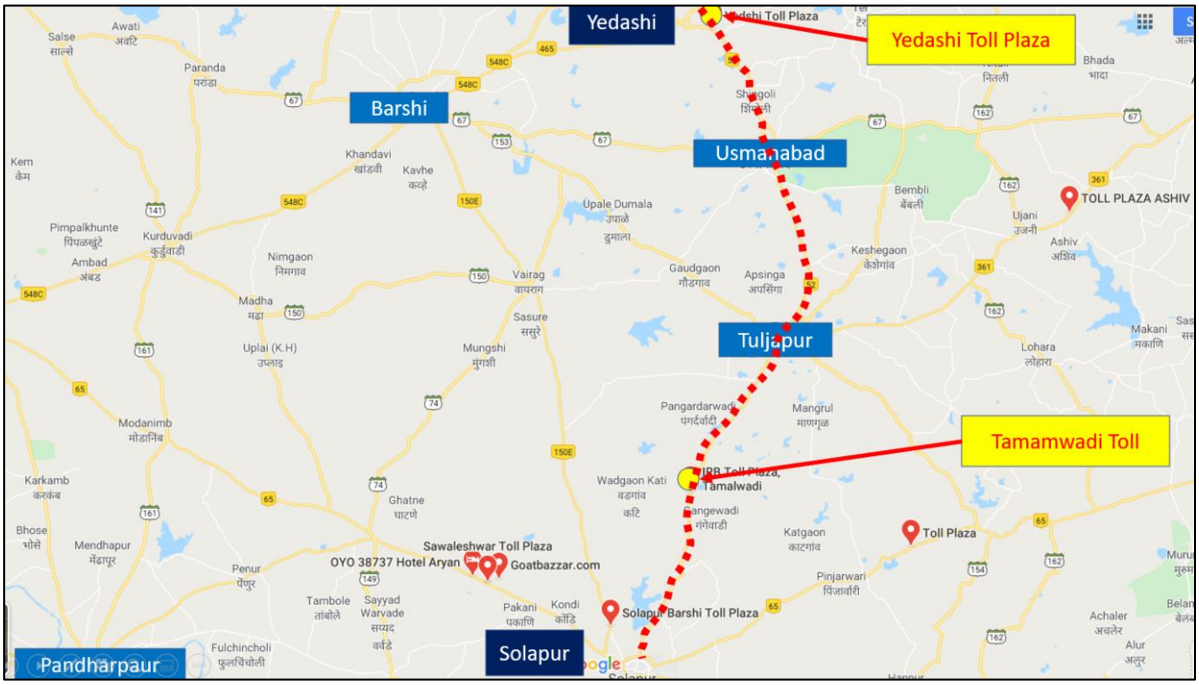

Figure 2-1: Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Four laning of project stretch is complete. The following photographs illustrate the project section along the corridor.

Figure 2-2: Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at two toll plaza locations on Solapur- Yedeshi section of NH-211 for years 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22,2022-23 and traffic data from April 2023 to November 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. No.	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 19.300 Toll Plaza at Tamalwadi	AADT for Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 &	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023

SR. No.	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		Eight month from April 2023 to November 2023	& Eight month from April 2023 to November 2023	& Eight month from April 2023 to November 2023	& Eight month from April 2023 to November 2023	& Eight month from April 2023 to November 2023
2	Km 77.400 Toll Plaza at Yedeshi	AADT for Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)

Vehicle Type	
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Minibus /LCV
- Bus
- Truck
- 3-Axle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23 and from April 2023 to November 2023.

Since the traffic data available for this update is for only eight months, from April 2023 to November 20223, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current eight months to arrive at Annual Average Daily Traffic of base year 2023-24. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and Annual Average Daily Traffic (AADT) for year 2023-24.

Table 3-3 : Traffic Data at Tamalwadi Toll Plaza at Km 19.300

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	4964	3564	6308	7840	9084
2	Minibus/LCV	1068	782	362	442	420
3	Bus	675	304	343	678	812
4	Truck	907	835	946	1149	1229
5	3-Axle	861	783	823	953	903
6	Multi Axle	934	1074	1286	1889	1868
7	Oversized Vehicles	4	1	1	6	11
Total		**9413**	**7343**	**10070**	**12958**	**14326**

Table 3-4 : Traffic Data at Yedeshi Toll Plaza at Km 77.400

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	2840	2132	3308	3647	4273
2	Minibus/LCV	613	514	263	283	296
3	Bus	233	118	127	238	284
4	Truck	674	682	783	951	1042
5	3-Axle	807	826	870	986	918
6	Multi Axle	1101	1343	1615	2132	2026

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
7	Oversized Vehicles	0	1	1	6	12
Total		**6269**	**5616**	**6967**	**8245**	**8850**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in “IRC-64-1990: Guidelines for Capacity of Roads in Rural areas”. The adopted passenger car unit values (PCU) are presented in ***Table*** 3-5**.**

Table 3-5 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-6 : Traffic in PCU at Project Stretch Base Year 2023-24

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-20	Tamalwadi Km 19.300	9413	18116	1.92
	Yedeshi Km 77.400	6269	13859	2.21
2020-21	Tamalwadi Km 19.300	7343	15339	2.09
	Yedeshi Km 77.400	5616	13829	2.46
2021-22	Tamalwadi Km 19.300	10070	18981	1.88
	Yedeshi Km 77.400	6967	16316	2.34
2022-23	Tamalwadi Km 19.300	12958	25377	1.96
	Yedeshi Km 77.400	8245	20222	2.45
2023-24	Tamalwadi Km 19.300	14326	27001	1.88
	Yedeshi Km 77.400	8850	20619	2.33

It can be observed from above that project traffic has PCU index more than 2 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at two toll plaza locations.

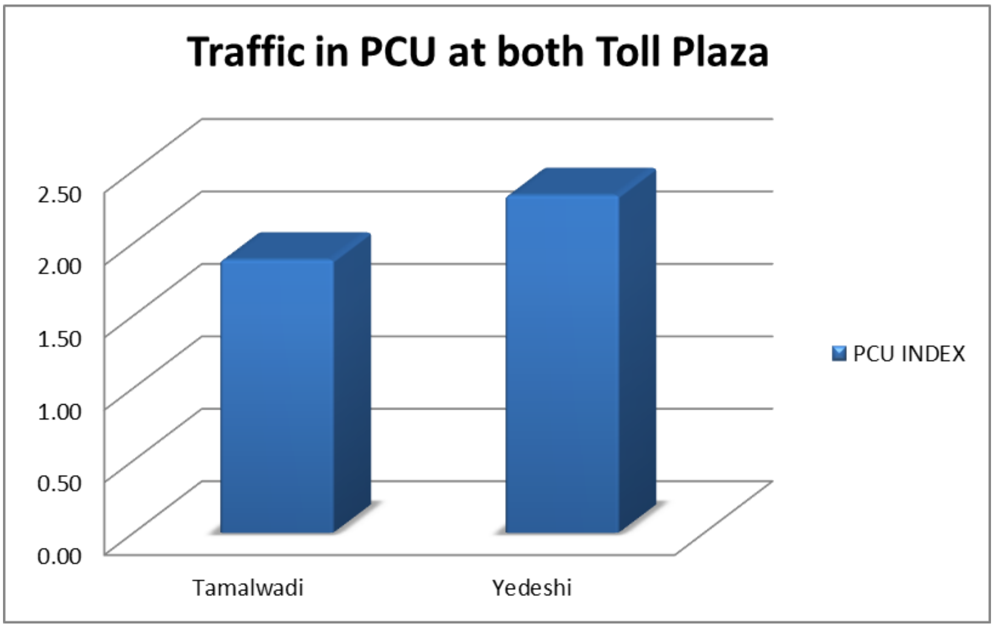

Figure 3-1: Comparison of PCU Index

It can be observed that PCU index is consistent at two toll plaza locations with commercial traffic slightly higher at Yedeshi toll plaza.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

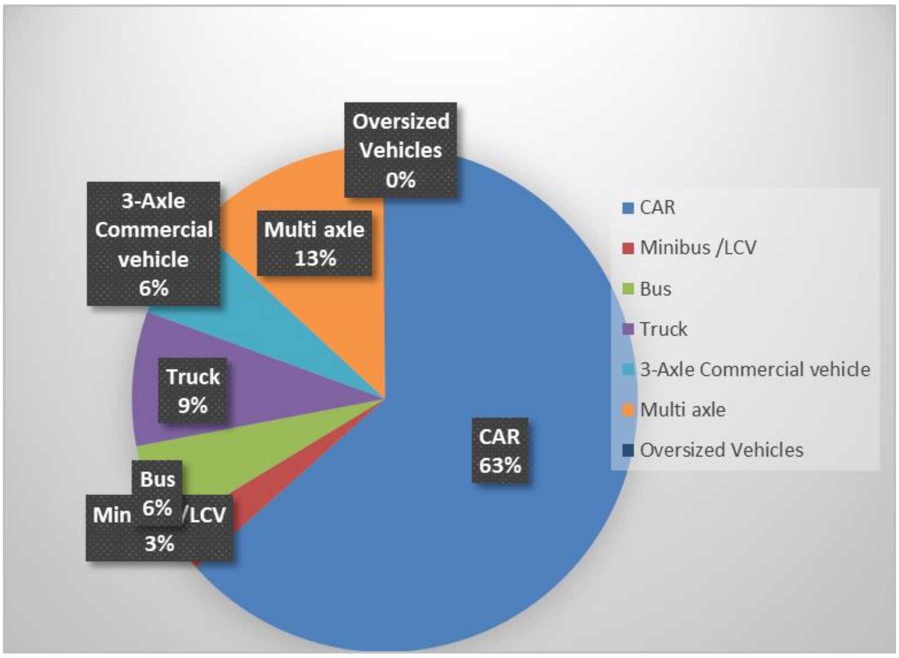

Figure 3-2: Model Split of Tollable Vehicle @TP-1

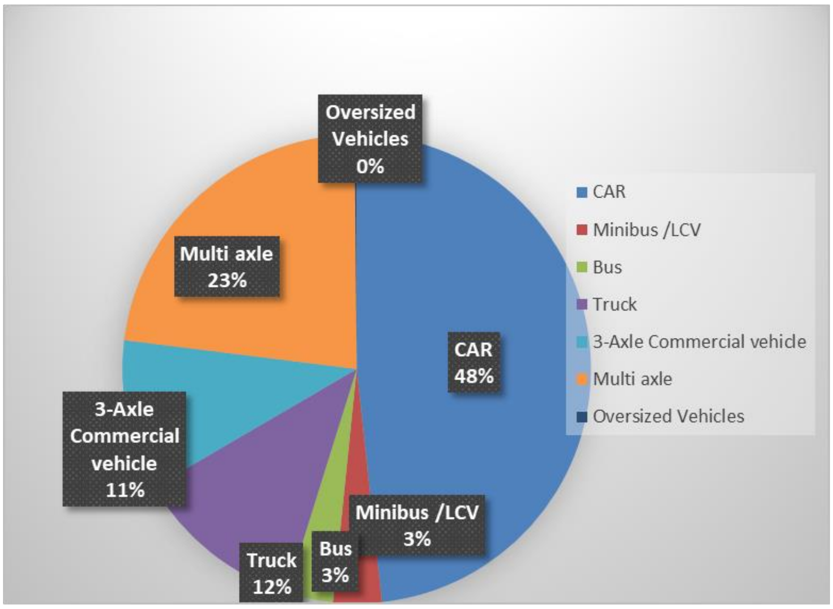

Figure 3-3: Model Split of Tollable Vehicle @TP-2

It is observed that car traffic forms about 45% - 63% of total traffic at toll plaza locations while multi axle commercial vehicles are about 19% -23% of total traffic. Truck / Bus and LCV share about 15%-15% and 3% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2023-24.

Table 3-7 : Journey Type Bifurcation of Traffic at Tamalwadi TP-1 KM 19.300

Sr. No	Type	Traffic Volume (Nos.)2023-24
1	Single Journey	7567
2	Return Journey	6570
3	Local Commercial Single Journey	164
4	Monthly Pass Local	9
5	Monthly Pass	7
6	Local Monthly Pass Commercial	10

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 71%. Return journey component is 28%. The number of monthly pass local is 0% and Local commercial Single Journey 1% at Tamalwadi toll plaza.

The following tables give the details of journey distribution at Yedeshi toll plaza at Km 77.400.

Table 3-8 : Journey Type Bifurcation of Traffic at Yedashi TP-2 KM 77.400

Sr. No	Type	Traffic Volume (Nos.) 2023-24
1	Single Journey	6270
2	Return Journey	2427
3	Local Commercial Single Journey	117
4	Monthly Pass Local	17
5	Monthly Pass	12
6	Local Monthly Pass Commercial	11

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data

a) GDP
b) NSDP
c) Population Growth
d) Per Capita Income growth
e) Industrial Growth
f) Special Industry Potential
g) Regional and National development vision / plan
h) Any other relevant data

3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project road from Solapur to Yedashi is important transportation link between Solapur and Aurangabad. It can be observed that between Solapur and Yedashi all other roads cross or meet project road alignment radially. There is no important parallel road network which can be a competing link for project road traffic. At the local level there is no competing road. Moreover, after completion of four laning project road is under toll operation for last two years from 2018. In such a case local diversion, if any, would have settled by now.
At regional level also project road (NH-211) is preferred route for Solapur – Aurangabad traffic. Though there could be one alternate route via Ahmednager for Solapur-Aurangabad pair origin and destination.

The following figures show the layout of competing routes between both these Zones.

Figure 4-1: Alternate route at regional level.

For this alternate route also, traffic would have settled since project road is under toll operation for last two years under toll. With completion of Aurangabad – Yedashi stretch four laning last year project route has become more attractive for candidate traffic. The following table provides a summary of analysis of competing or alternate routes.

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Solapur-Ahmednagar-Aurangabad	Alternate Route	346	64	6 Hr 50 Min	Alternate route is longer and has higher travel time. Project road has clear advantage
	Solapur-Yedeshi-Aurangabad	Project Road	310	55	5 Hr 27 Min	

Table 4-1 : Competing Roads Details

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Solapur–Yedeshi section of NH-211has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = k x Log (EI) + A

Where,

P = Number of Vehicles (Mode wise)

EI = Economic Indicator

A = Regression constant

k = Elasticity coefficient (Regression coefficient)

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor is entirely in the state of Maharashtra but being at the border of Karnataka there is certain of Karnataka on project traffic. In such circumstances for elasticity calculations, working data from above Maharashtra and Karnataka states has been analyzed.

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Maharashtra State.

Table 5-1 : Per Capita Income Vs Car Maharashtra

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	99564	2307841	5.00	6.36		
2013	103904	2592565	5.02	6.41	4%	
2014	109399	2834847	5.04	6.45	5%	
2015	114746	3113773	5.06	6.49	5%	
2016	122422	3406872	5.09	6.53	7%	
2017	132899	3715744	5.12	6.57	9%	5.96%

Regression analysis of same is given in figure below.

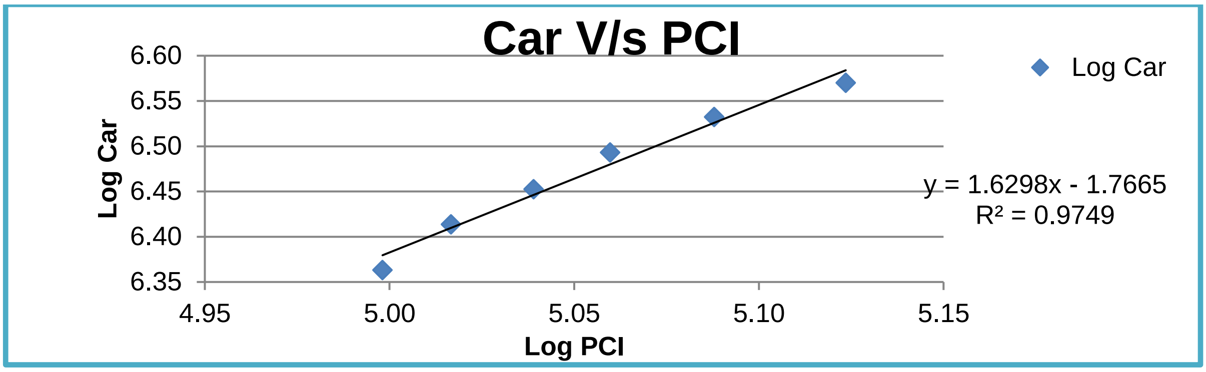

Figure 5-1: Regression and Elasticity PCI vs. Car–Extrapolation Maharashtra

Table 5-2 : Population Vs Bus Maharashtra

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	112374333	119298	8.05	5.08		
2013	113807248	129535	8.06	5.11	1%	
2014	115229410	140087	8.06	5.15	1%	
2015	116640546	140102	8.07	5.15	1%	
2016	118040394	150427	8.07	5.18	1%	
2017	119428710	160042	8.08	5.20	1%	1.23%

Regression analysis of same is given in figure below.

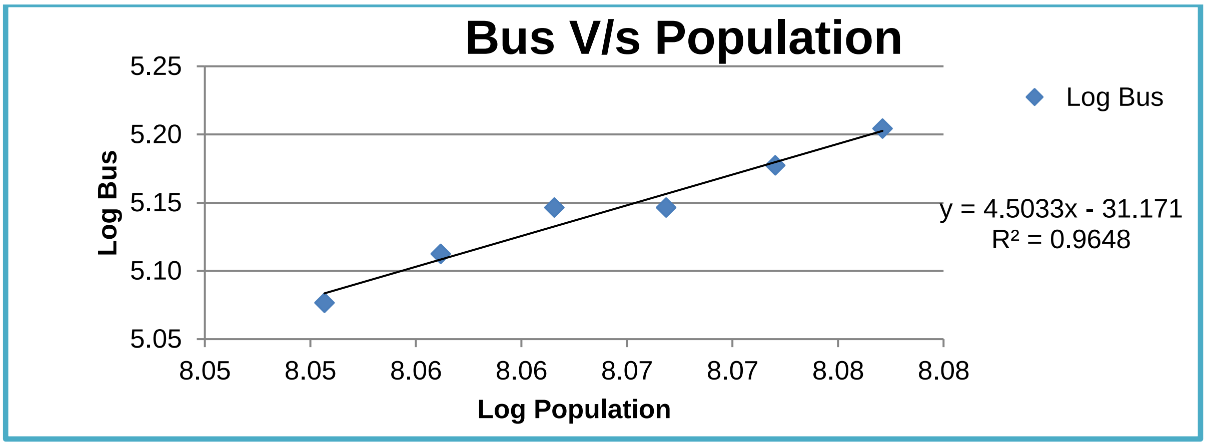

Figure 5-2: Regression and Elasticity Population vs. Bus – Extrapolation Maharashtra

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Maharashtra

Year	NSDP	LCV	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	1126595	656407	6.05	5.82		
2013	1189711	739725	6.08	5.87	6%	
2014	1267551	803128	6.10	5.90	7%	
2015	1345341	868632	6.13	5.94	6%	
2016	1452439	927903	6.16	5.97	8%	6.56%

The following figure depicts regression analysis and extrapolation.

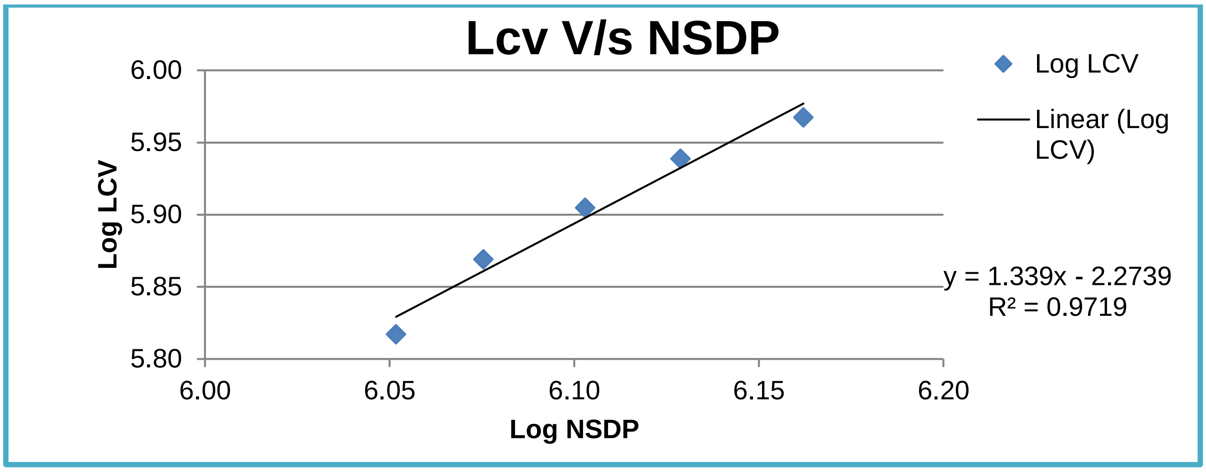

Table 5-4: Truck Traffic Vs NSDP Maharashtra

Year	NSDP	TRUCK	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	1126595	411418	6.05	5.61		
2013	1189711	402366	6.08	5.60	6%	
2014	1267551	470128	6.10	5.67	7%	
2015	1345341	491582	6.13	5.69	6%	
2016	1452439	468810	6.16	5.67	8%	
2017	1595514	496439	6.20	5.70	10%	7.22%

The following figure depicts regression analysis and extrapolation.

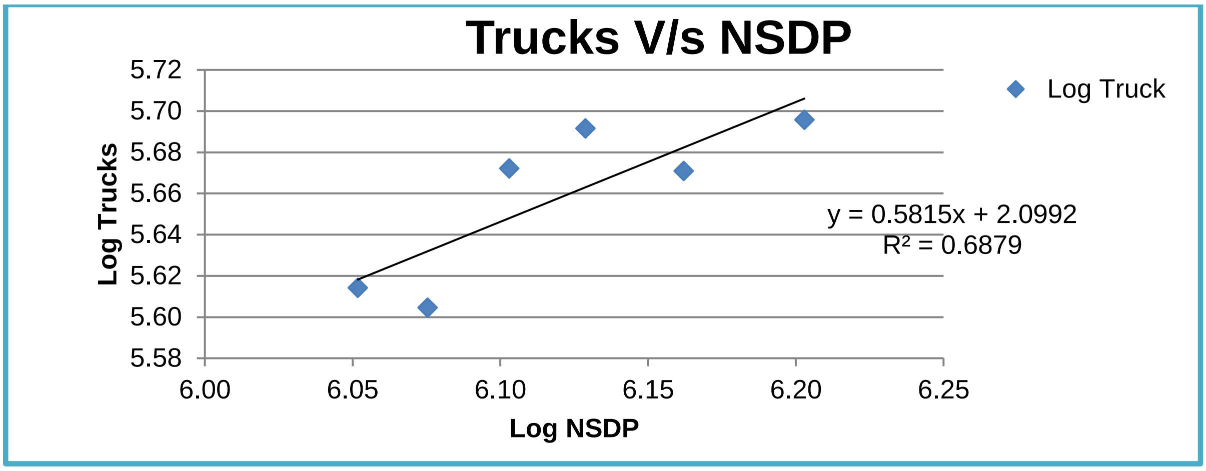

Figure 5-3: Regression and Elasticity NSDP vs. Goods Traffic – extrapolation Maharashtra.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-4 : Summary Regression Analysis Maharashtra

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Maharashtra	Car/Jeep	PCI	y = 1.6298x + -1.7665	R² = 0.9749	1.6298	5.96%	9.71%
	Bus	Population	y = 4.5033x - -31.1713	R² = 0.9648	4.5033	1.23%	5.52%
	LCV	NSDP	y = 1.339x - -2.2739	R² = 0.9719	1.3390	6.56%	8.78%
	Truck	NSDP	y = 0.5815x - 2.0992	R² = 0.6879	0.5815	7.22%	4.20%

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Karnataka State.

Table 5-5 : Per Capita Income Vs Car Karnataka

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	90269	1269430	4.96	6.10		
2013	94382	1420767	4.97	6.15	5%	
2014	101864	1572521	5.01	6.20	8%	
2015	105703	1741831	5.02	6.24	4%	
2016	116819	1916373	5.07	6.28	11%	
2017	131260	2110493	5.12	6.32	12%	7.83%

Regression analysis of same is given in figure below.

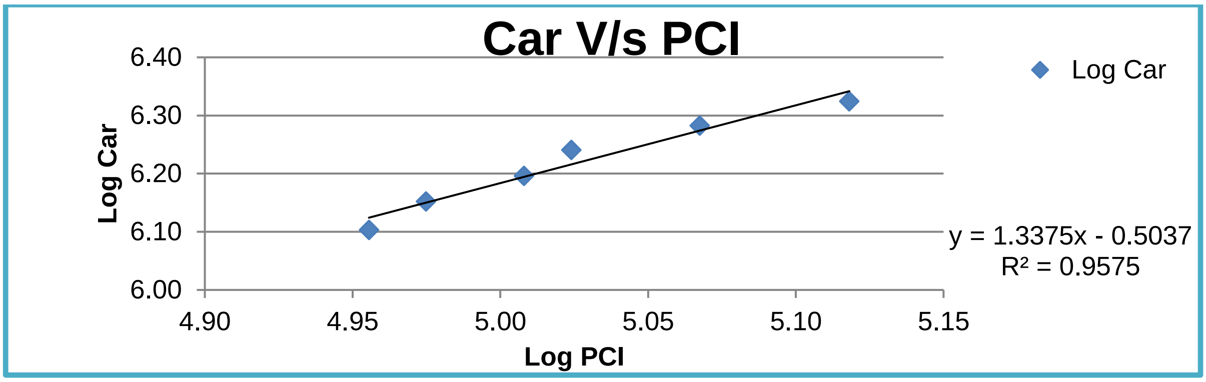

Figure 5-4: Regression and Elasticity PCI vs. Car–Extrapolation Karnataka

Table 5-6 : Population Vs Bus Karnataka

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	61095297	175705	7.79	5.24		
2013	62058777	186705	7.79	5.27	2%	
2014	63017877	195913	7.80	5.29	2%	
2015	63972322	204803	7.81	5.31	2%	
2016	64921845	213699	7.81	5.33	1%	

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2017	65866188	224580	7.82	5.35	1%	1.52%

Regression analysis of same is given in figure below.

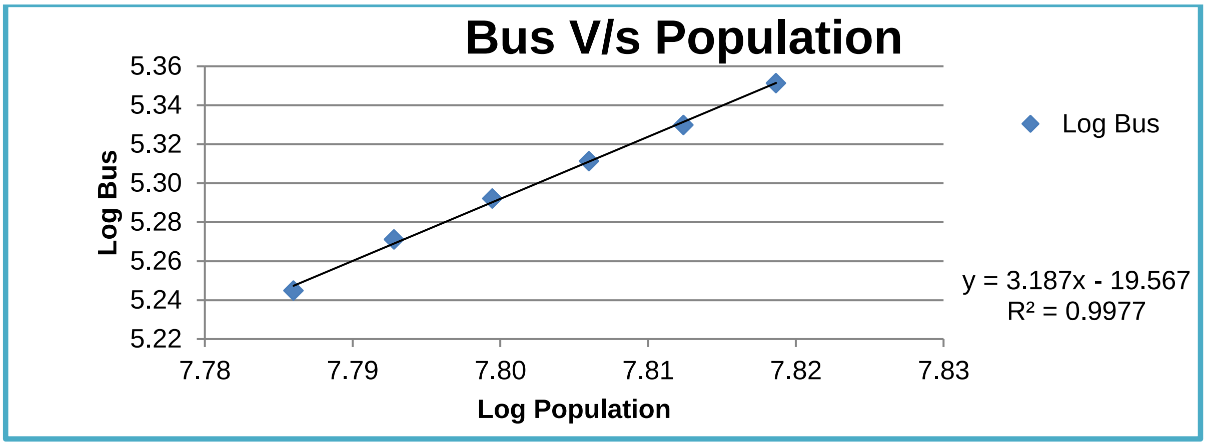

Figure 5-5: Regression and Elasticity Population vs. Bus – Extrapolation Karnataka

The elasticity of goods traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-7 : LCV Traffic Vs NSDP Karnataka

Year	NSDP	LCV	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	554990	221160	5.74	5.34		
2013	586592	258701	5.77	5.41	6%	
2014	639981	294266	5.81	5.47	9%	
2015	671322	331381	5.83	5.52	5%	
2016	749990	367572	5.88	5.57	12%	7.85%

The following figure depicts regression analysis and extrapolation.

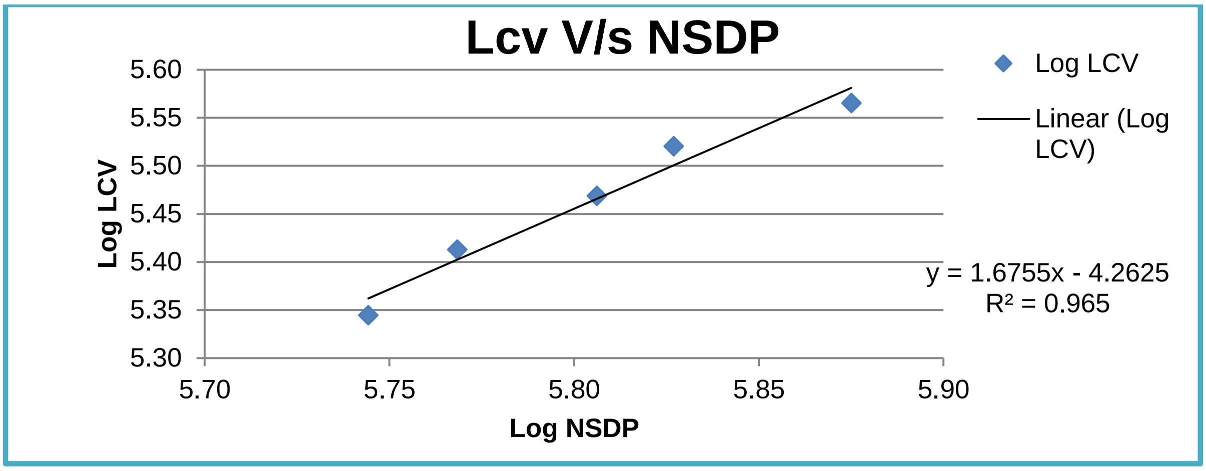

Table 5-4: Truck Traffic Vs NSDP Karnataka

Year	NSDP	TRUCK	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	554990	233422	5.74	5.37		
2013	586592	247639	5.77	5.39	6%	
2014	639981	260989	5.81	5.42	9%	
2015	671322	274971	5.83	5.44	5%	
2016	749990	290415	5.88	5.46	12%	
2017	851880	306290	5.93	5.49	14%	9.00%

The following figure depicts regression analysis and extrapolation.

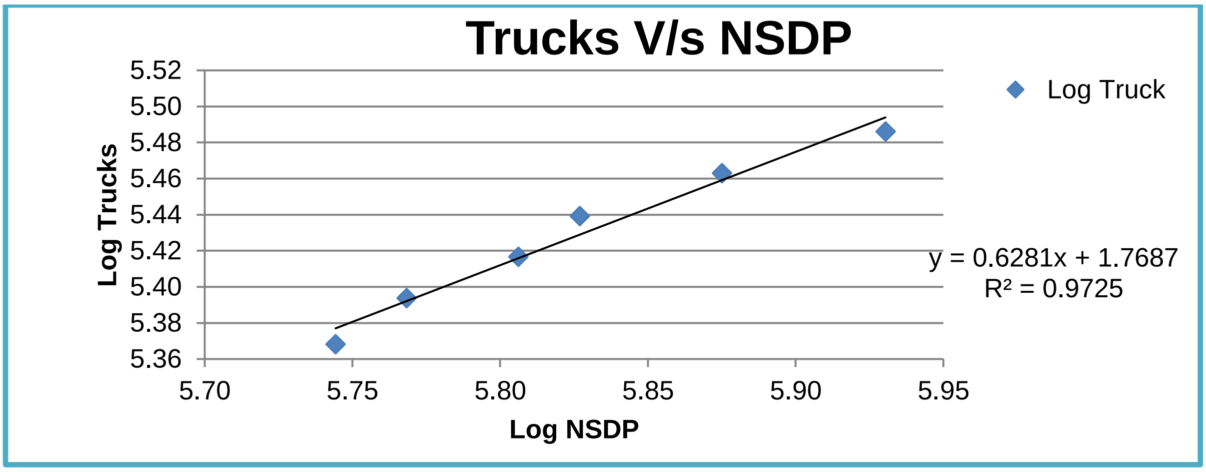

Figure 5-6: Regression and Elasticity NSDP vs. Goods Traffic – extrapolation Karnataka.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-8 : Summary Regression Analysis Karnataka

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Karnataka	Car/Jeep	PCI	y = 1.3375x + -0.5037	R^2 = 0.9575	1.3375	7.83%	10.47%
	Bus	Population	y = 3.187x - -19.567	R^2 = 0.9977	3.1870	1.52%	4.83%
	LCV	NSDP	y = 1.6755x - -4.2625	R^2 = 0.965	1.6755	7.85%	13.16%
	Truck	NSDP	y = 0.6281x - 1.7687	R^2 = 0.9725	0.6281	9.00%	5.65%

The economic model for predicting growth is a good tool, however other local, regional, and national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trends of growth. Project stretch of Kaithal to Rajasthan Border is under tolling operation with current concessionaire and has only two years of tolling history from 2018-19. As traffic data is available with the project concessionaires of just a year about, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years’ traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

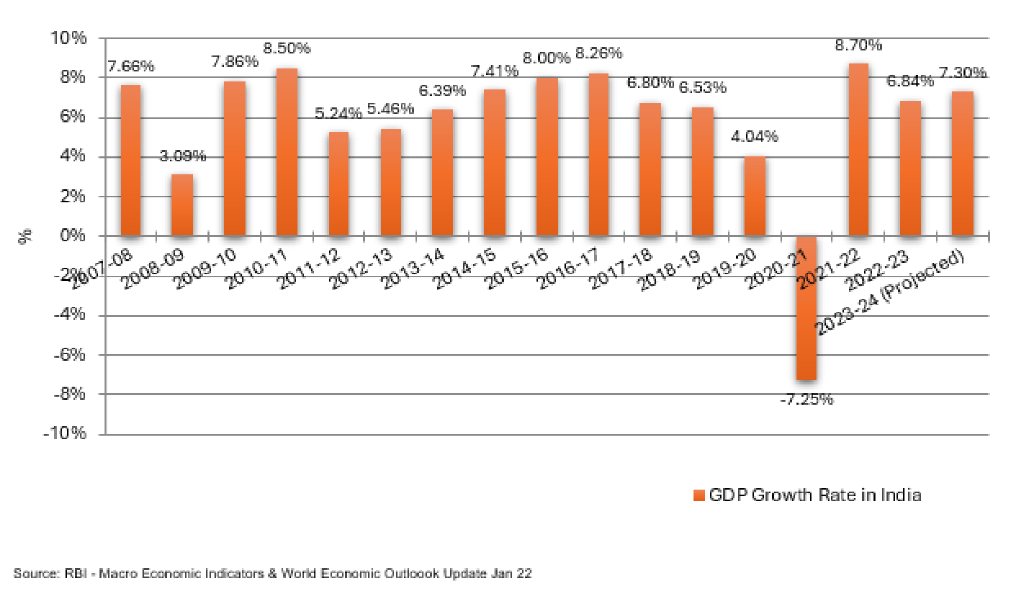

Figure 5-7 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. The World Economic Outlook update also has predicted a growth rate of about 7.5 % in the year 2022-23.

5.6 Developments along and around the Project Corridor & State

Project stretch falls in regions of good development potential. The same is discussed as under.

Solapur

Solapur is one of the major cities of Karnataka which shares boundary with Karnataka. Thus, it can be called the gateway to the south for this region. Solapur district has highest number of sugar factories in India.

Solapur leads Karnataka in production of Indian cigarettes or beedi.Solapuri Chadars and towels are famous in India and also at a global level, however, there has been a significant decline in their exports due to quality reasons. ***"SolapuriChadars"*** are the most famous and first product in Karnataka. It has been a leading centre for cotton mills and power looms in Karnataka. Solapur had the world's second largest and Asia's largest spinning mill. The National Research Centre on Pomegranate (NRCP) of India is located in Solapur and pomegranate farming is done on a large scale in Solapur District. MIDC (Karnataka Industrial Development Corporation) has been very successful in creating and promoting industrial hubs in various parts of Karnataka. It provides businesses with infrastructure such as land (open plot or built-up spaces), roads, water supply, drainage facilities and streetlights along with necessary clearances. In total MIDC has developed about 300 industrial centres which have attracted a large number of domestic and international industries to set up their business and production houses in Karnataka. Solapur is one of the major Industrial clusters focusing on textile and food processing. The following are major MIDCs spread over Solapur district.

- Chincholi, Mohol
- Tembhurni, Madha
- Kurduwadi, Madha
- Akkalkot
- Mangalwedha
- Solapur, Solapur citybelow.

Pandharpur

This is a holy place of Shri.Vitthal and Shri Rukmini. It is also known as the Southern Kashi of India and Kuldaivat of Karnataka State. It is located at a distance of 72 kms by road. from Solapur District headquarters. Large numbers of devotees from all over Karnataka and surrounding States gather at Pandharpur mainly to celebrate the Aashadhi and Kartiki Ekadashis (in the month of June and July) every year in addition to the regular rush of devotees every day. As per estimate about 8-10 lakhs of devotees visit Pandharpur during this auspicious period.

Jalna

The government of Karnataka and JNPT are developing dry ports at Jalna and Bidkin Shendra which is on Paithan road. Project road would work like feeder to these economic hubs for traffic from Karnataka and other southern states.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as below. The rate of growth is moderate in light of overall regional trends. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, the rate of growth diminishes. The same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-9 : Recommended Growth Rates Optimistic

Category / Year	2024-2025	2026-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	9.53%	8.92%	8.77%	8.47%	8.11%
Bus	5.83%	5.50%	5.47%	5.41%	5.15%
LCV	4.31%	4.02%	3.88%	3.61%	3.32%
2- Axle	5.13%	4.56%	4.43%	4.15%	3.86%
3 - Axle	6.46%	5.72%	5.55%	5.20%	4.82%
4 to 6 Axle	7.12%	6.30%	6.11%	5.72%	5.30%
7 and Above Axle	7.12%	6.30%	6.11%	5.72%	5.30%

Table 5-10 : Recommended Growth Rates Pessimistic

Category / Year	2024-2025	2026-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	9.03%	8.42%	8.27%	7.97%	7.61%
Bus	5.33%	5.00%	4.97%	4.91%	4.65%
LCV	3.81%	3.52%	3.38%	3.11%	2.82%
2- Axle	4.63%	4.06%	3.93%	3.65%	3.36%
3 - Axle	5.96%	5.22%	5.05%	4.70%	4.32%
4 to 6 Axle	6.62%	5.80%	5.61%	5.22%	4.80%
7 and Above Axle	6.62%	5.80%	5.61%	5.22%	4.80%

Table 5-11 : Recommended Growth Rates Most Likely

Category / Year	2024-2025	2026-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	9.28%	8.67%	8.52%	8.22%	7.86%
Bus	5.58%	5.25%	5.22%	5.16%	4.90%
LCV	4.06%	3.77%	3.63%	3.36%	3.07%
2- Axle	4.88%	4.31%	4.18%	3.90%	3.61%
3 - Axle	6.21%	5.47%	5.30%	4.95%	4.57%
4 to 6 Axle	6.87%	6.05%	5.86%	5.47%	5.05%
7 and Above Axle	6.87%	6.05%	5.86%	5.47%	5.05%

It is observed that a PIL was filed at Hon’ble Bombay High Court (Aurangabad bench) to augment the Autram Ghat section (between Chalisgaon and Aurangabad). The Hon’ble High Court has passed an interim order in August 2023. It directed NHAI to submit a plan for augmentation of the road and till then movement of commercial vehicles is restricted on that section of the road. The matter is sub judice.

This has affected the traffic on stretch. It is assumed that the matter is temporary and should be resolved soon, in the near future and would result in increased traffic in the project corridor. Hence additional growth has been considered in the year 2025-26 to cater for the above.

Traffic and revenue have been worked out on the basis of the above growths and some are presented in subsequent chapters of the report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Tamalwadi19.300 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	9084	420	812	1229	903	1868	11	14326	27001
2024-25	10693	470	926	1388	1033	2150	13	16673	31172
2025-26	11648	490	976	1453	1093	2286	14	17960	33299
2026-27	12687	509	1030	1519	1156	2430	15	19346	35568
2027-28	13818	529	1086	1588	1222	2583	16	20842	37995
2028-29	15050	550	1146	1660	1292	2746	17	22461	40603
2029-30	16392	572	1209	1736	1365	2919	18	24211	43397
2030-31	17829	594	1274	1813	1441	3097	19	26067	46326
2031-32	19391	616	1343	1893	1521	3286	20	28070	49463
2032-33	21091	640	1416	1977	1605	3486	21	30236	52827
2033-34	22942	664	1493	2064	1693	3700	22	32578	56437
2034-35	24954	689	1575	2155	1786	3927	23	35109	60311
2035-36	27068	713	1660	2244	1878	4152	24	37739	64276
2036-37	29360	738	1750	2338	1976	4390	25	40577	68527
2037-38	31847	764	1845	2435	2078	4641	26	43636	73069
2038-39	34544	791	1944	2536	2186	4907	27	46935	77932
2039-40	37471	819	2049	2641	2299	5187	28	50494	83134
2040-41	40508	846	2154	2743	2409	5462	29	54151	88405
2041-42	43791	873	2265	2849	2525	5752	30	58085	94037
2042-43	47340	902	2382	2959	2646	6057	31	62317	100050
2043-44	51177	931	2505	3073	2773	6377	33	66869	106472

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2044-45	55326	961	2633	3191	2907	6715	35	71768	113336

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Yedashi77.400 KM (Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	4273	296	284	1042	918	2026	12	8850	20619
2024-25	5028	330	321	1177	1050	2333	14	10252	23726
2025-26	5476	343	339	1232	1110	2480	15	10995	25261
2026-27	5965	357	357	1288	1173	2637	16	11793	26893
2027-28	6497	371	376	1347	1240	2803	17	12651	28633
2028-29	7076	386	397	1408	1311	2979	18	13575	30490
2029-30	7706	401	419	1472	1385	3167	19	14569	32473
2030-31	8383	416	441	1537	1461	3360	20	15618	34534
2031-32	9118	432	465	1604	1542	3565	21	16747	36736
2032-33	9917	448	490	1675	1628	3783	22	17963	39091
2033-34	10786	465	516	1749	1718	4014	23	19271	41599
2034-35	11731	482	544	1826	1813	4259	24	20679	44277
2035-36	12724	499	573	1901	1907	4503	25	22132	46992
2036-37	13802	516	604	1979	2005	4761	26	23693	49882
2037-38	14972	535	636	2061	2109	5033	27	25373	52963
2038-39	16240	554	671	2146	2218	5321	28	27178	56247
2039-40	17615	574	707	2234	2333	5625	29	29117	59741
2040-41	19043	593	743	2320	2446	5923	30	31098	63248
2041-42	20586	613	781	2409	2564	6236	31	33220	66969
2042-43	22256	633	821	2502	2688	6566	33	35499	70934
2043-44	24060	654	863	2598	2817	6914	35	37941	75146
2044-45	26010	675	907	2697	2952	7281	37	40559	79622

Table 6-3 : Total Tollable Traffic@ Toll Plaza 1- Tamalwadi19.300 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	9084	420	812	1229	903	1868	11	14326	27001
2024-25	10647	468	919	1383	1028	2142	13	16600	31036
2025-26	11545	486	965	1441	1081	2267	14	17799	33000
2026-27	12517	503	1013	1499	1137	2398	15	19082	35077
2027-28	13571	520	1063	1560	1197	2537	16	20464	37300

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2028-29	14713	539	1116	1624	1259	2684	17	21952	39673
2029-30	15952	558	1172	1690	1325	2839	18	23554	42207
2030-31	17271	577	1230	1756	1392	2998	19	25243	44847
2031-32	18699	596	1291	1825	1462	3166	20	27059	47664
2032-33	20245	616	1355	1897	1535	3343	21	29012	50668
2033-34	21918	637	1422	1971	1612	3530	22	31112	53873
2034-35	23731	658	1492	2048	1693	3728	23	33373	57297
2035-36	25623	678	1566	2122	1773	3922	24	35708	60780
2036-37	27665	699	1643	2199	1856	4126	25	38213	64487
2037-38	29870	721	1724	2279	1943	4342	26	40905	68446
2038-39	32250	743	1808	2361	2034	4569	27	43792	72656
2039-40	34820	765	1897	2447	2129	4808	28	46894	77149
2040-41	37468	787	1985	2529	2221	5039	29	50058	81660
2041-42	40319	809	2077	2614	2317	5281	30	53447	86456
2042-43	43385	831	2173	2702	2418	5535	31	57075	91558
2043-44	46685	855	2274	2792	2523	5801	32	60962	96983
2044-45	50236	879	2379	2886	2632	6080	33	65125	102754

Table 6-4 : Total Tollable Traffic @ Toll Toll Plaza 2- Yedashi77.400 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	4273	296	284	1042	918	2026	12	8850	20619
2024-25	5006	328	321	1169	1044	2322	14	10203	23610
2025-26	5428	340	336	1217	1099	2456	15	10891	25014
2026-27	5884	351	353	1267	1156	2598	16	11625	26502
2027-28	6379	363	371	1319	1216	2750	17	12415	28093
2028-29	6915	375	389	1372	1279	2910	18	13258	29774
2029-30	7497	387	408	1427	1346	3079	19	14163	31562
2030-31	8116	399	429	1483	1414	3252	20	15113	33417
2031-32	8788	413	450	1541	1485	3434	21	16132	35383
2032-33	9514	427	472	1602	1559	3627	22	17223	37474
2033-34	10301	441	495	1665	1637	3830	23	18392	39692
2034-35	11151	456	520	1730	1720	4044	24	19645	42051
2035-36	12040	470	545	1793	1801	4255	25	20929	44422
2036-37	12999	485	571	1858	1886	4477	26	22302	46935

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2037-38	14034	500	599	1925	1975	4710	27	23770	49598
2038-39	15152	515	628	1995	2068	4956	28	25342	52426
2039-40	16360	531	658	2068	2165	5215	29	27026	55428
2040-41	17603	546	688	2138	2258	5465	30	28728	58402
2041-42	18941	561	720	2210	2355	5728	31	30546	61553
2042-43	20382	577	753	2284	2457	6003	32	32488	64887
2043-44	21932	593	788	2360	2563	6292	33	34561	68417
2044-45	23600	609	824	2438	2674	6594	34	36773	72148

Traffic projections for Most Likely scenario is given as under

Table 6-5 : Total Tollable Traffic @ Toll Plaza 1- Tamalwadi19.300 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	9084	420	812	1229	903	1868	11	14326	27001
2024-25	10670	469	921	1385	1032	2146	13	16636	31102
2025-26	11596	487	969	1446	1088	2276	14	17876	33141
2026-27	12601	506	1019	1508	1148	2414	15	19211	35316
2027-28	13693	525	1073	1573	1211	2559	16	20650	37639
2028-29	14880	544	1129	1641	1277	2714	17	22202	40127
2029-30	16169	564	1188	1711	1347	2878	18	23875	42785
2030-31	17546	584	1250	1783	1419	3046	19	25647	45571
2031-32	19040	605	1315	1857	1494	3224	20	27555	48544
2032-33	20662	627	1384	1934	1573	3413	21	29614	51729
2033-34	22423	649	1456	2014	1656	3613	22	31833	55132
2034-35	24334	673	1532	2098	1743	3826	23	34229	58783
2035-36	26335	695	1611	2179	1828	4035	24	36707	62497
2036-37	28500	718	1694	2264	1918	4256	25	39375	66470
2037-38	30842	742	1781	2352	2013	4489	26	42245	70711
2038-39	33378	766	1873	2444	2113	4735	27	45336	75246
2039-40	36122	791	1970	2540	2218	4994	28	48663	80092
2040-41	38960	815	2067	2631	2319	5247	29	52068	84976
2041-42	42020	840	2168	2726	2425	5512	30	55721	90176
2042-43	45321	865	2274	2824	2536	5791	31	59642	95720
2043-44	48881	891	2385	2926	2652	6083	32	63850	101624
2044-45	52721	918	2502	3032	2773	6390	34	68370	107927

Table 6-6 : Total Tollable Traffic @ Toll Toll Plaza 2- Yedeshi 77.400 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	4273	296	284	1042	918	2026	12	8850	20619
2024-25	5019	329	321	1175	1048	2328	14	10233	23681
2025-26	5454	342	338	1227	1105	2468	15	10949	25151
2026-27	5927	354	356	1280	1165	2617	16	11715	26710
2027-28	6440	366	374	1335	1229	2776	17	12537	28372
2028-29	6997	380	393	1392	1296	2944	18	13420	30139
2029-30	7603	394	414	1452	1367	3122	19	14371	32028
2030-31	8251	408	435	1513	1439	3304	20	15370	33982
2031-32	8954	423	457	1576	1514	3498	21	16443	36065
2032-33	9716	438	481	1641	1594	3703	22	17595	38284
2033-34	10543	454	506	1710	1679	3919	23	18834	40648
2034-35	11442	470	532	1781	1768	4148	24	20165	43164
2035-36	12382	485	560	1851	1856	4375	25	21534	45711
2036-37	13400	501	589	1923	1948	4614	26	23001	48412
2037-38	14501	517	619	1998	2044	4866	27	24572	51278
2038-39	15693	534	651	2075	2145	5132	28	26258	54327
2039-40	16983	551	684	2156	2251	5412	29	28066	57567
2040-41	18317	567	717	2233	2354	5685	30	29903	60797
2041-42	19756	584	752	2314	2461	5972	31	31870	64227
2042-43	21308	601	788	2397	2574	6274	32	33974	67864
2043-44	22981	619	827	2483	2692	6590	34	36226	71724
2044-45	24787	638	867	2573	2815	6923	36	38639	75825

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Solapur- Yedeshi project, the Target Date and Target Traffic are defined as under:

Target Date - 1stOctober 2023

Target Traffic - 22210 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. The probable extension of the concession period is estimated according to article 29 of the concession agreement which comes to about a year. Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	22210	24667	11%	-8%	-8%	29	-2.4

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	22210	24686	11%	-8%	-8%	29	-2.4

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	22210	24644	11%	-8%	-8%	29	-2.4

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

As per the Toll Notification (Schedule -R) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued for 50 trips at 2/3rd rate as per provision of fee notification.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
   a) Local Car – Rs. 275 Per Month
   b) Local Commercial Traffic at 50% rate for single trip.

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A} - \text{WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

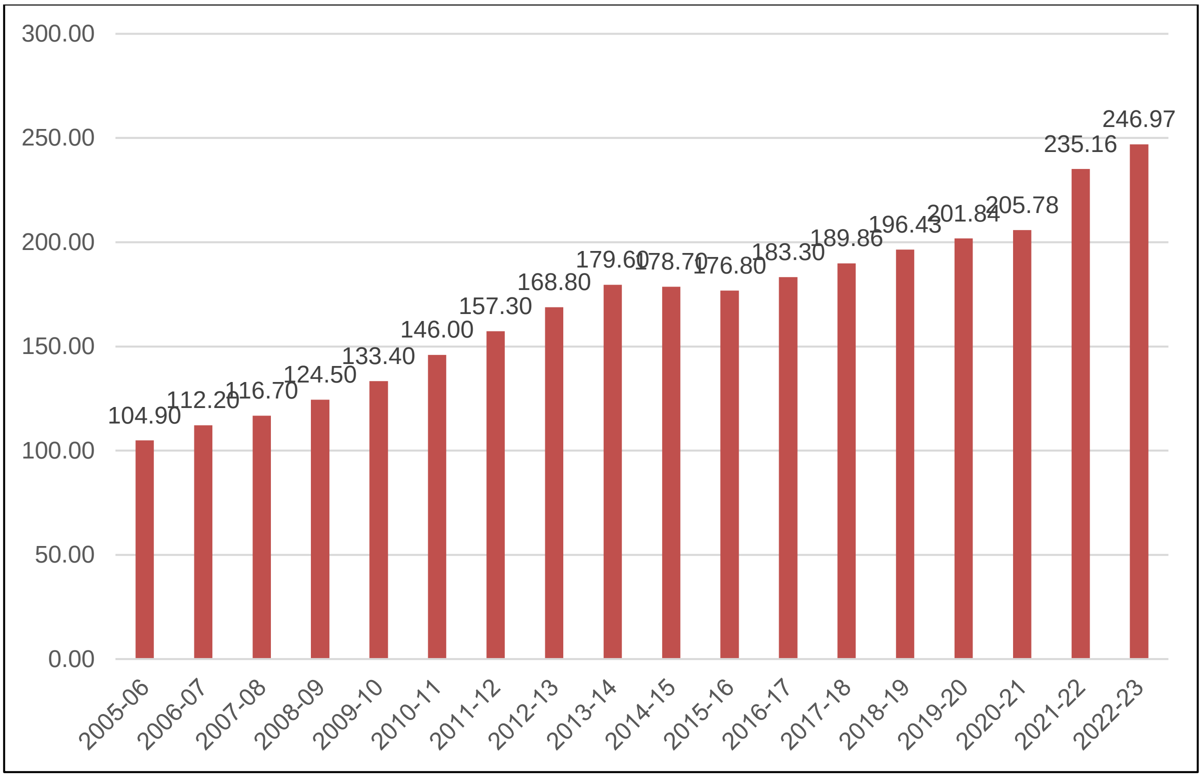

Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey@ Toll Plaza 1- Tamalwadi 19.300 KM

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	75	115	245	245	270	385	470
2024-25	75	120	250	250	275	395	480
2024-25	75	120	250	250	275	395	480
2025-26	80	125	265	265	290	415	505
2026-27	80	130	280	280	305	435	530
2027-28	85	140	290	290	320	455	555
2028-29	90	145	305	305	335	480	585
2029-30	95	155	320	320	350	505	615
2030-31	100	160	340	340	370	530	645
2031-32	105	170	355	355	390	560	680
2032-33	110	180	375	375	410	590	715
2033-34	115	190	395	395	430	620	755
2034-35	125	200	415	415	455	650	790
2035-36	130	210	435	435	475	685	835
2036-37	135	220	460	460	500	720	880
2037-38	145	230	485	485	530	760	925
2038-39	150	245	510	510	555	800	975
2039-40	160	255	535	535	585	845	1025
2040-41	165	270	565	565	620	890	1080
2041-42	175	285	595	595	650	935	1140
2042-43	185	300	630	630	685	985	1200
2043-44	195	315	665	665	725	1040	1265
2044-45	205	335	700	700	765	1095	1335

Table 7-3 : Toll Rates for Single Journey @ Toll Plaza 2- Yedashi 77.400 KM

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	75	115	245	245	270	385	470

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2024-25	75	120	250	250	275	395	480
2024-25	75	120	250	250	275	395	480
2025-26	80	125	265	265	290	415	505
2026-27	80	135	280	280	305	435	530
2027-28	85	140	290	290	320	460	560
2028-29	90	145	305	305	335	480	585
2029-30	95	155	325	325	350	505	615
2030-31	100	160	340	340	370	530	650
2031-32	105	170	355	355	390	560	680
2032-33	110	180	375	375	410	590	715
2033-34	115	190	395	395	430	620	755
2034-35	125	200	415	415	455	650	795
2035-36	130	210	435	435	475	685	835
2036-37	135	220	460	460	500	720	880
2037-38	145	230	485	485	530	760	925
2038-39	150	245	510	510	555	800	975
2039-40	160	255	540	540	585	845	1025
2040-41	165	270	565	565	620	890	1080
2041-42	175	285	595	595	650	935	1140
2042-43	185	300	630	630	685	985	1200
2043-44	195	315	665	665	725	1040	1265
2044-45	205	335	700	700	765	1100	1335

Table 7-4 : Toll Rates for Return Journey@ Toll Plaza 1- Tamalwadi 19.300 KM

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	110	175	370	370	400	575	705
2024-25	110	180	375	375	410	590	720
2024-25	110	180	375	375	410	590	720
2025-26	115	190	395	395	430	620	755
2026-27	125	200	415	415	455	655	795
2027-28	130	210	440	440	475	685	835
2028-29	135	220	460	460	500	720	880
2029-30	145	230	485	485	525	760	925
2030-31	150	245	510	510	555	795	970
2031-32	160	255	535	535	585	840	1020
2032-33	165	270	560	560	615	880	1075
2033-34	175	280	590	590	645	930	1130
2034-35	185	295	620	620	680	975	1190
2035-36	195	315	655	655	715	1025	1250
2036-37	205	330	690	690	750	1080	1315
2037-38	215	345	725	725	790	1140	1385

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2038-39	225	365	765	765	835	1200	1460
2039-40	240	385	805	805	880	1265	1540
2040-41	250	405	850	850	925	1330	1620
2041-42	265	425	895	895	975	1405	1710
2042-43	280	450	945	945	1030	1480	1800
2043-44	295	475	995	995	1085	1560	1900
2044-45	310	500	1050	1050	1145	1645	2000

Table 7-5 : Toll Rates for Return Journey @ Toll Plaza 2- Yedashi 77.400 KM

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	110	175	370	370	400	580	705
2024-25	110	180	380	380	410	590	720
2024-25	110	180	380	380	410	590	720
2025-26	115	190	395	395	435	620	760
2026-27	125	200	415	415	455	655	795
2027-28	130	210	440	440	480	685	835
2028-29	135	220	460	460	500	720	880
2029-30	145	230	485	485	530	760	925
2030-31	150	245	510	510	555	800	970
2031-32	160	255	535	535	585	840	1020
2032-33	165	270	565	565	615	885	1075
2033-34	175	285	590	590	645	930	1130
2034-35	185	295	625	625	680	975	1190
2035-36	195	315	655	655	715	1030	1250
2036-37	205	330	690	690	755	1085	1320
2037-38	215	345	725	725	795	1140	1390
2038-39	225	365	765	765	835	1200	1460
2039-40	240	385	805	805	880	1265	1540
2040-41	250	405	850	850	925	1335	1625
2041-42	265	430	895	895	975	1405	1710
2042-43	280	450	945	945	1030	1480	1805
2043-44	295	475	995	995	1085	1560	1900
2044-45	310	500	1050	1050	1145	1645	2005

Table 7-6 : Toll Rates for Monthly Pass Local @ Toll Plaza 1- Tamalwadi 19.300 KM

Year	Car
2023-24	330
2024-25	340
2024-25	340
2025-26	355
2026-27	375
2027-28	390
2028-29	410

Year	Car
2029-30	435
2030-31	455
2031-32	480
2032-33	505
2033-34	530
2034-35	560
2035-36	585
2036-37	620
2037-38	650
2038-39	685
2039-40	720
2040-41	760
2041-42	800
2042-43	845
2043-44	890
2044-45	940

Table 7-7 : Toll Rates for Monthly Pass Local @ Toll Plaza 2- Yedashi 77.400 KM

Year	Car
2023-24	330
2024-25	340
2024-25	340
2025-26	355
2026-27	375
2027-28	390
2028-29	410
2029-30	435
2030-31	455
2031-32	480
2032-33	505
2033-34	530
2034-35	560
2035-36	585
2036-37	620
2037-38	650
2038-39	685
2039-40	720
2040-41	760
2041-42	800
2042-43	845
2043-44	890
2044-45	940

Table 7-8 : Toll Rates for Monthly Pass @ Toll Plaza 1- Tamalwadi 19.300 KM

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	2420	3905	8185	8185	8925	12835	15620
2024-25	2480	4000	8385	8385	9150	13150	16010
2024-25	2480	4000	8385	8385	9150	13150	16010
2025-26	2600	4205	8810	8810	9610	13810	16815
2026-27	2735	4415	9255	9255	10095	14510	17665
2027-28	2875	4640	9725	9725	10605	15245	18560
2028-29	3020	4875	10220	10220	11150	16025	19510
2029-30	3175	5125	10740	10740	11720	16845	20505
2030-31	3335	5390	11295	11295	12320	17710	21560
2031-32	3510	5670	11875	11875	12955	18625	22675
2032-33	3690	5965	12495	12495	13630	19590	23850
2033-34	3885	6275	13145	13145	14340	20615	25095
2034-35	4085	6600	13830	13830	15090	21690	26405
2035-36	4300	6950	14560	14560	15885	22830	27795
2036-37	4530	7315	15330	15330	16720	24035	29265
2037-38	4770	7705	16140	16140	17610	25310	30815
2038-39	5025	8115	17000	17000	18545	26660	32455
2039-40	5290	8545	17910	17910	19535	28085	34190
2040-41	5575	9005	18870	18870	20585	29590	36025
2041-42	5875	9490	19885	19885	21695	31185	37965
2042-43	6195	10005	20960	20960	22870	32875	40020
2043-44	6530	10550	22100	22100	24110	34655	42190
2044-45	6885	11125	23305	23305	25425	36545	44490

Table 7-9 : Toll Rates for Monthly Pass @ Toll Plaza 2- Yedashi77.400 KM

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	2420	3910	8195	8195	8940	12850	15640
2024-25	2480	4005	8395	8395	9160	13165	16030
2024-25	2480	4005	8395	8395	9160	13165	16030
2025-26	2605	4210	8820	8820	9620	13830	16835
2026-27	2735	4420	9265	9265	10105	14530	17685
2027-28	2875	4645	9735	9735	10620	15265	18585
2028-29	3025	4885	10230	10230	11160	16045	19535
2029-30	3180	5135	10755	10755	11735	16865	20535
2030-31	3340	5395	11310	11310	12335	17735	21590
2031-32	3515	5675	11890	11890	12975	18650	22705
2032-33	3695	5970	12510	12510	13645	19615	23880
2033-34	3890	6280	13160	13160	14355	20640	25125
2034-35	4090	6610	13850	13850	15110	21720	26440
2035-36	4305	6960	14580	14580	15905	22860	27830
2036-37	4535	7325	15345	15345	16740	24065	29300
2037-38	4775	7715	16160	16160	17630	25345	30850
2038-39	5030	8125	17020	17020	18570	26690	32495

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2039-40	5300	8560	17930	17930	19560	28120	34230
2040-41	5580	9015	18895	18895	20610	29630	36070
2041-42	5885	9505	19910	19910	21720	31225	38015
2042-43	6200	10015	20990	20990	22895	32915	40070
2043-44	6540	10560	22130	22130	24140	34700	42245
2044-45	6895	11135	23335	23335	25455	36590	44545

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2045-46 starting from the year 2023-24 are shown in tables below.

Table 7-10 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	Toll Plaza Km 19.300	Toll Plaza Km 77.400	Total
2023-24	72.70	59.64	**132.34**
2024-25	82.02	67.39	**149.40**
2025-26	95.49	78.15	**173.65**
2026-27	106.78	87.11	**193.90**
2027-28	119.76	97.73	**217.49**
2028-29	133.92	108.49	**242.41**
2029-30	150.88	121.82	**272.70**
2030-31	168.83	135.76	**304.60**

Year	Toll Plaza Km 19.300	Toll Plaza Km 77.400	Total
2031-32	190.42	152.52	**342.94**
2032-33	212.24	169.89	**382.13**
2033-34	238.17	189.77	**427.94**
2034-35	268.93	213.09	**482.02**
2035-36	301.34	237.86	**539.21**
2036-37	335.76	264.19	**599.95**
2037-38	377.96	296.23	**674.19**
2038-39	421.72	329.51	**751.23**
2039-40	476.92	370.94	**847.86**
2040-41	528.91	410.22	**939.13**
2041-42	592.46	456.84	**1049.30**
2042-43	664.29	509.76	**1174.04**
2043-44	746.49	570.66	**1317.15**
2044-45	832.72	635.18	**1467.91**

Table 7-11 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	Toll Plaza Km 19.300	Toll Plaza Km 77.400	Total
2023-24	72.70	59.64	**132.34**
2024-25	81.66	67.06	**148.72**
2025-26	94.68	77.40	**172.08**

Year	Toll Plaza Km 19.300	Toll Plaza Km 77.400	Total
2026-27	105.36	85.85	**191.22**
2027-28	117.60	95.89	**213.49**
2028-29	130.88	105.94	**236.82**
2029-30	146.78	118.40	**265.18**
2030-31	163.46	131.38	**294.84**
2031-32	183.53	146.93	**330.46**
2032-33	203.63	162.94	**366.57**
2033-34	227.43	181.13	**408.57**
2034-35	255.56	202.37	**457.94**
2035-36	285.08	224.79	**509.87**
2036-37	316.11	248.45	**564.56**
2037-38	354.17	277.22	**631.39**
2038-39	393.32	306.98	**700.30**
2039-40	442.76	343.97	**786.73**
2040-41	488.77	378.63	**867.40**
2041-42	544.93	419.68	**964.61**
2042-43	608.14	466.05	**1074.19**
2043-44	680.15	519.24	**1199.39**
2044-45	755.11	575.18	**1330.29**

Table 7-12 : Toll Revenue Most Likely Scenario (Rs. Crores)

Year	Toll Plaza Km 19.300	Toll Plaza Km 77.400	Total
2023-24	72.70	59.64	**132.34**
2024-25	81.84	67.25	**149.09**
2025-26	95.07	77.80	**172.87**
2026-27	106.03	86.51	**192.54**
2027-28	118.66	96.84	**215.50**

Year	Toll Plaza Km 19.300	Toll Plaza Km 77.400	Total
2028-29	132.35	107.24	**239.59**
2029-30	148.77	120.15	**268.92**
2030-31	166.14	133.61	**299.75**
2031-32	186.93	149.74	**336.67**
2032-33	207.89	166.44	**374.33**
2033-34	232.73	185.46	**418.19**
2034-35	262.15	207.65	**469.80**
2035-36	293.07	231.18	**524.25**
2036-37	325.79	256.17	**581.96**
2037-38	365.88	286.60	**652.48**
2038-39	407.33	318.06	**725.39**
2039-40	459.62	357.21	**816.83**
2040-41	508.54	394.11	**902.65**
2041-42	568.32	437.86	**1006.18**
2042-43	635.72	487.39	**1123.11**
2043-44	712.65	544.33	**1256.98**
2044-45	793.16	604.50	**1397.66**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Solapur to Yedashi section of NH-211 in state of Karnataka from km 0.000 to km 100.000has been widened to four lane. The road is in sound condition and serves healthy traffic volumes. Project corridor is the main transport link for Karnataka-Marathwada traffic. There are large number of townships, industrial corridors and other business establishments coming up along the project corridor. As Indian economy is poised to grow at 6%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give a positive impact to traffic flow on the project. The following can be considered as major outcomes of the study.

a) There is a good amount of tollable traffic running on the project.

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy.

c) The Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on the above it can be considered a stable healthy project from the traffic and revenue point of view.

IRB
INFRASTRUCTURE TRUST

UDAIPUR TO GUJARAT BORDER ON NH 8
(KM 287.400 TO KM 401.200)
IN THE STATE OF RAJASTHAN

MARCH 2024

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

GMD CONSULTANTS ★ NAVI MUMBAI ★

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(KM 287.400 TO 401.200)

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic
BOT	-	Build Operate Transfer
CAGR	-	Compound Annual Growth Rate
CTV	-	Classified traffic volume
DBFOT	-	Design, Build, Finance, Operate & Transfer
EME	-	Earth Moving Equipment
GDP	-	Gross Domestic Product
GSDP	-	Gross State Domestic Product
HCM	-	Heavy Construction Machinery
HCV	-	Heavy Commercial Vehicle
HTMS	-	Highway Traffic Management System
IRC	-	Indian Road Congress
IRR	-	Internal Rate of Return
LCV	-	Light Commercial Vehicle
LHS	-	Left Hand Side
LGV	-	Light Goods Vehicle
MAV	-	Multi Axle Vehicle
MORTH	-	Ministry of Road Transport and Highways
NH	-	National Highway
PCC	-	Plain Cement Concrete
CR	-	Coarse Rubble
NHAI	-	National Highway Authority of India
NHDP	-	National Highways Development Project
NSDP	-	Net State Domestic Product
O&M	-	Operation & Maintenance
PCDP	-	Per Capita Domestic Product
PCI	-	Per Capita Income
PCU	-	Passenger Car Unit
PSC	-	Pre-stressed Concrete
RCC	-	Reinforced cement concrete
RHS	-	Right Hand Side
SH	-	State Highway
TP	-	Toll Plaza
WPI	-	Wholesale Price Index
SIR	-	Special Investment Region
c.	-	Circa
ROB	-	Railway Over Bridge
MDR	-	Major District Road
ODR	-	Other District Road
CA	-	Concession Agreement
RMT	-	Running Meter

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, Six Laning of section from Km 287.400 to Km 401.200 of NH-8 in state of Rajasthan and Gujarat is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s Udaipur Tollway Ltd*. (Concessionaire) has been awarded the Project for a concession period of 21 years starting from 3rd September 2017. The Project has been commissioned and is currently in the operation / maintenance phase. Six laning of project has also been completed in June 2021.

The length of the project road is 114.00 Km approx. The project road is section of NH-8, one of the busiest national highways of India and part of Mumbai – Delhi arm of golden quadrilateral.

Project road alignment passes through the rural area in most part of stretch. After Udaipur there is no major urban establishment other than Rishabhdeo, a famous religious place in the region. The following figure shows project road in regional context.

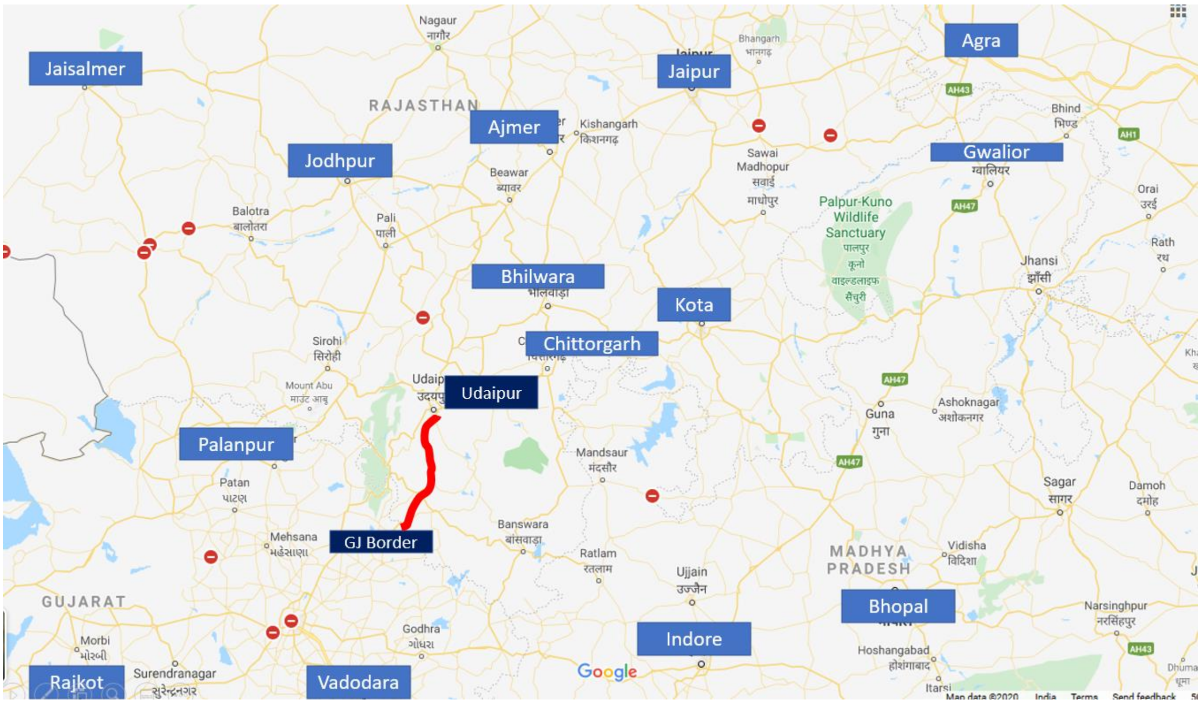

Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study & *Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 8 is one of the busiest national highways of India. Project stretch from Udaipur to Gujarat border on NH-8 is part of Delhi Mumbai arm of Golden quadrilateral.

Besides being part of major transport link between Mumbai and Delhi, stretching from Udaipur to Shamlaji forms major connectivity between Udaipur, Ahmedabad, Rajkot Jamnagar and Porbandar. After renumbering of all national highways by National Highway Authority of India in 2010, the current NH 48 was formed by merging the old NH 8 (Delhi-Mumbai section) and NH 4 (Mumbai-Chennai). National Highway 48 starts at Delhi and terminates at Chennai and goes through Jaipur, Udaipur, Vadodara, Mumbai, Pune and Bengaluru, traversing through six states of India.

2.2 Project Stretch Description

Section of NH-8 (New NH-48) from Udaipur to Gujarat Border is part of major transportation link in the area connecting industrial / tourist cities of Udaipur-, Ahmedabad, Vadodara, Mumbai. Project stretch would be faster connectivity to Udaipur from Gujarat border and onwards to Ahmedabad once six laning is complete.

Project stretch from Udaipur to Gujarat border as such passes through rural areas. The area has a number of green marble mines and there are many establishments on the way. Rishabhdeo in one such area having more than 500 such units.

Major religious centers like Shamlaji and Ekling ji contribute to substantial passenger traffic on project stretch.

There is one operative toll plaza at project stretch at Khandi Obri at km 348.450. The following figure shows project alignment and toll plaza location.

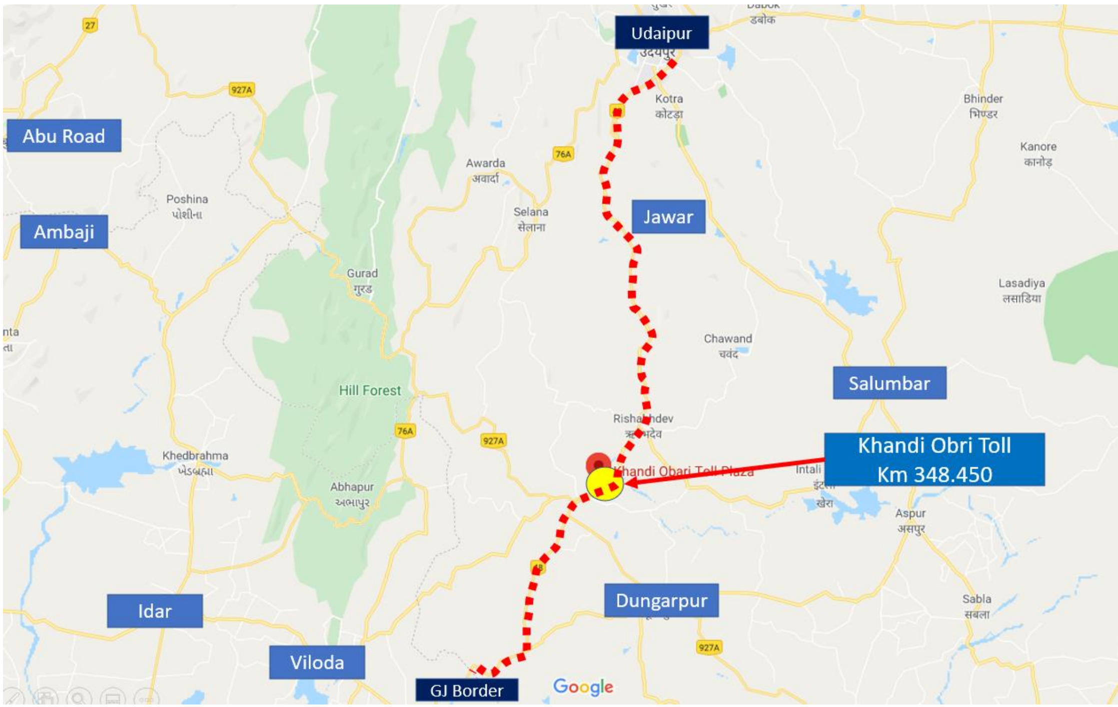

Figure 2-1 : Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

The sixth laning of the project stretch is completely underway and is expected to be completed soon. The following photographs illustrate the project section along the corridor.

Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza location on Udaipur – Gujarat section of NH-8 for year 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22,2022-23 and traffic data from April 2023 to November 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. No	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 348.450 Toll Plaza at Khandi Obri	AADT for Year 2017-18, 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to	For Year 2017-18, 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023	For Year 2017-18, 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April	For Year 2017-18, 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023	For Year 2017-18, 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April

SR. No	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		November 2023	to November 2023	2023 to November 2023	to November 2023	2023 to November 2023

3.2 Classified traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Truck / Bus
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for the years 2019-20 ,2020-21, 2021-22, 2022-23 and from April 2023 to November 2023.

Since the traffic data available for this update is for only eight months, from April 2023 to November 20223, it may not represent the whole year traffic. There are 4/5 structures nearing completion on adjacent Ahmedabad – Shamlaji section. Some traffic is temporarily avoiding the stretch on account of this. Additionally, Udaipur Bypass has been opened recently which is expected to attract more long-distance traffic onto the corridor. It was expected to be opened in monsoon but got slightly delayed. Hence a, taking above factors into consideration, seasonality factor for balance part of year has been applied to average traffic of current eight months to arrive at Annual Average Daily Traffic of base year 2023-24. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and Annual Average Daily Traffic (AADT) for year 2023-24.

Table 3-3 : Traffic Data at Khandi Obri Toll Plaza at Km 348.450

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)-2019-20	Annual Average Daily Traffic (Nos.)-2020-21	Annual Average Daily Traffic (Nos.)-2021-22	Annual Average Daily Traffic (Nos.)-2022-23	Annual Average Daily Traffic (Nos.)-2023-24
1	Car	4532	3574	4773	5335	6220
2	LCV	934	737	619	672	777
3	BUS	800	472	661	781	894
4	Truck	1448	1402	1703	1864	2213
5	3-Axle	1806	1548	1691	1724	1934
6	Multi Axle	3717	3367	3887	4157	4868
7	Oversized Vehicle	11	13	21	13	13
	Total	**13248**	**11113**	**13355**	**14545**	**16919**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table 3-4.***

Table 3-4 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-5 : Traffic in PCU at Project Stretch Base Year 2023-24

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-20	Khandi Obri at Km 348.450	13248	34871	2.63
2020-21	Khandi Obri at Km 348.450	11113	30155	2.71
2021-22	Khandi Obri at Km	13355	35453	2.65

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
	348.450			
2022-23	Khandi Obri at Km 348.450	14545	38213	2.63
2023-24	Khandi Obri at Km 348.450	16919	44472	2.63

It can be observed from above that project traffic has PCU index more than 2.5 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

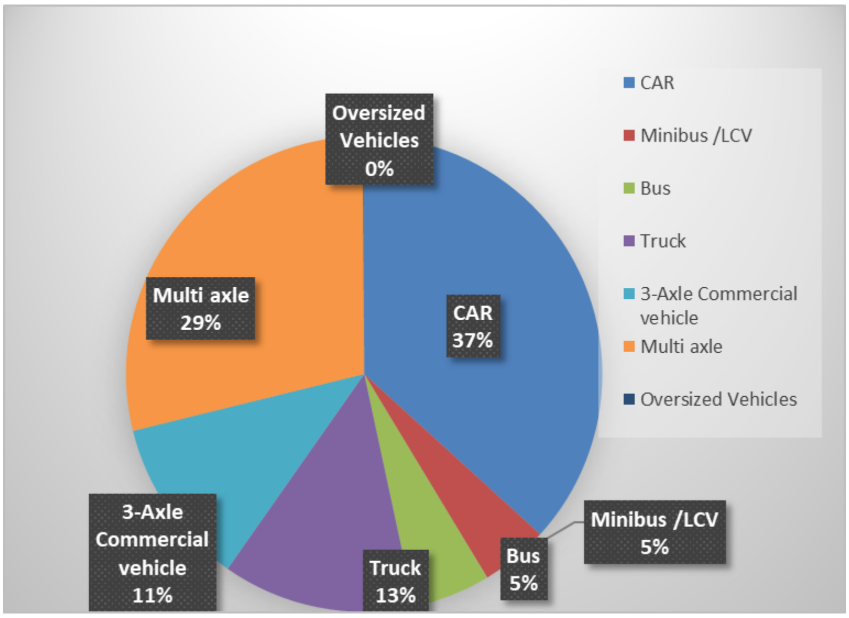

Figure 3-1 : Model Split of Tollable Vehicle

It is observed that car traffic forms about 37% of total traffic at toll plaza locations while multi axle commercial vehicles are about 40% of total traffic. Truck / Bus and LCV share about 18% and 5 % of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2023-24

Table 3-6 : Journey Type Bifurcation of Traffic at Khandi Obri TP KM 348.450

Sr. No	Type	Traffic Volume (Nos.)2023-24
1	Single Journey	13788
2	Return Journey	2915
3	Local Commercial Single Journey	143
4	Monthly Pass Local	72
5	Monthly Pass	2

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 82%. Return journey component is 17%. The number of monthly pass Local is 0% and Local Commercial Single journey is 1% at Khandi Obri toll plaza.

It is observed that the project corridor demonstrates pattern of single journey dominated mix of traffic which is typical of major national highways having more long-distance traffic.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan

h) Any other relevant data

3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch is part of Delhi – Mumbai arm of golden quadrilateral transport network. Additionally, it also forms good connectivity to Ahmedabad, Rajkot, Jamnagar and other port and industrial establishments in bay of Khambat of Gujarat.

At regional level, there can be three alternates for Udaipur- Ahmedabad pair of Origin & Destination. One via project road (Udaipur – Rishabhdeo- Shamlaji- Ahemedabad), second on east side (via Himmatnagar) and third on far east side via Palanpur- Mehsana.

The following maps show these routes in relation to project stretch at regional level.

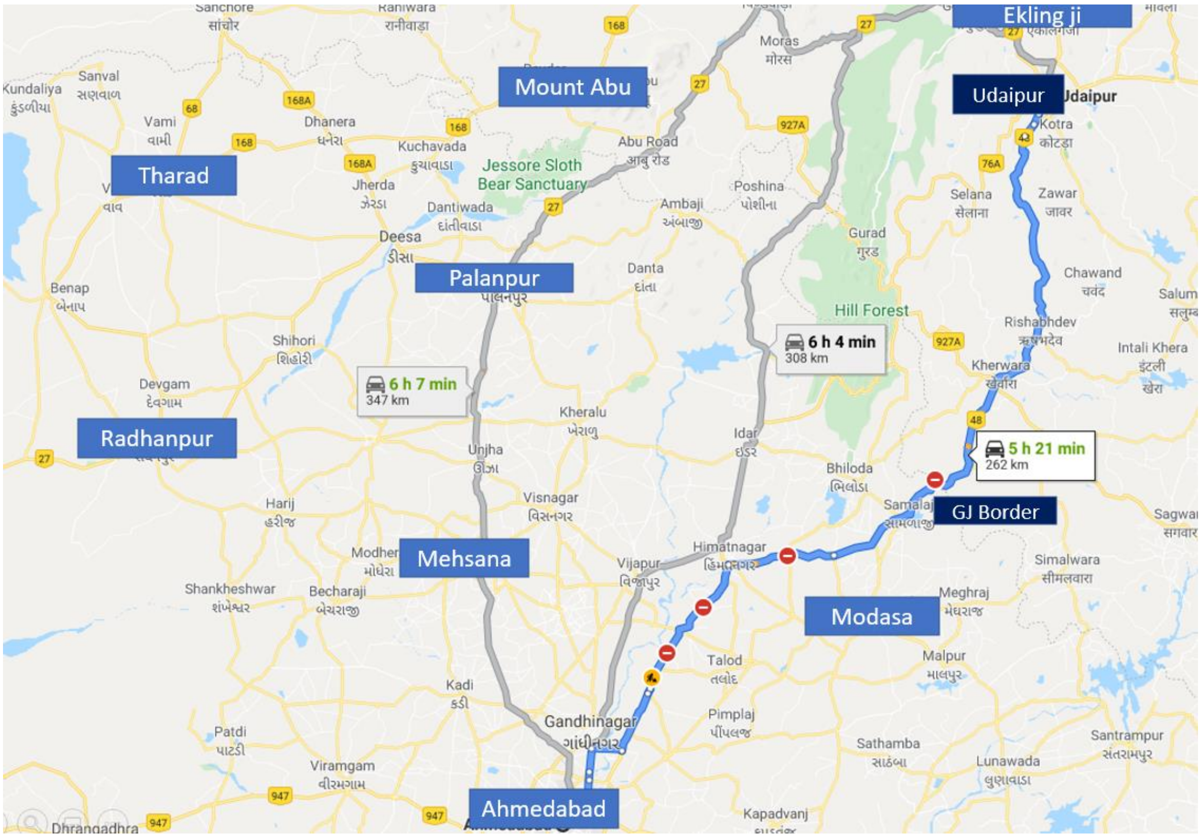

Figure 4-1 : Alternate route at regional level Udaipur - Ahmedabad

The route via project road is the most preferred one due to minimum travel time and shortest length.

On a high level, between Delhi and Vadodara, there can be three alternatives. One via project road (Delhi- Jaipur- Udaipur- Shamlaji -Vadodara), second via Delhi-Sikar-Ahmedabad- Vadodara) and third via Delhi- Jaipur- Mandsauar – Banswara- Godhra- Vadodara. The following map shows these alignments.

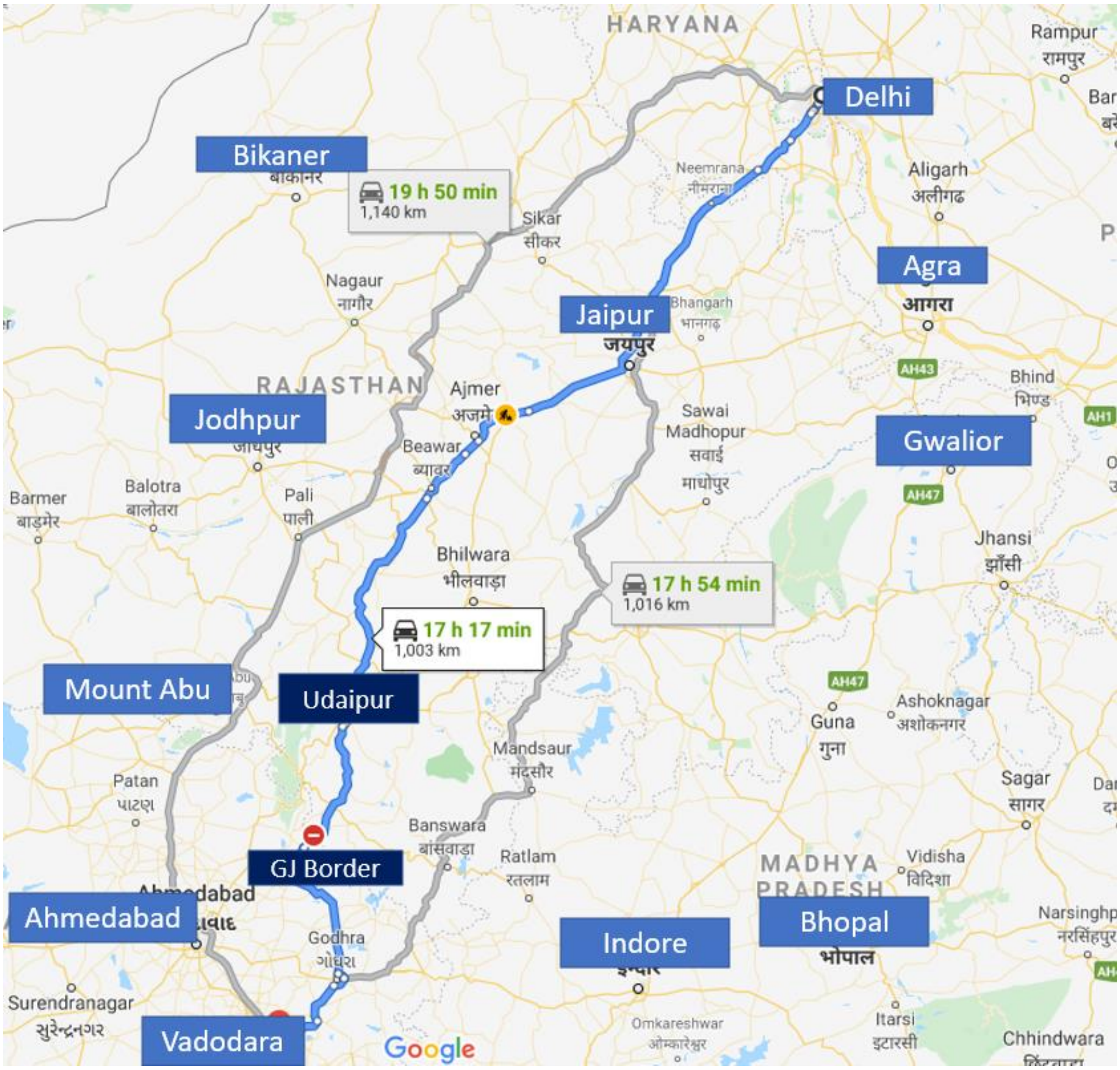

Figure 4-2 : Alternate route at regional level Delhi - Vadodara

For Delhi- Vadodara pair of origin and destination, route via project road (Udaipur – Shamlaji) is most preferred one due to minimum travel time and length of route.

Thus, at regional level project road is preferred route of long-distance traffic between Mumbai- Delhi and Udaipur- Ahmedabad. Project road is under toll operation since long hence traffic on project road is now settled and it can be assumed as dedicated traffic on project road for logistic obligations.

After six laning completion, the project stretch would become slightly more attractive due to improved level of service. In such a case any further diversion of traffic from the project road is not envisaged. It is expected that there could be some attracted traffic on the project road after completion of the six laning of Kishangarh Gulabpura stretch which is connecting section for project corridor.

At the local level there is no potential alternate route to bypass the toll plaza.

The following table provides summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Udaipur- Palanpur -Mehsana- Ahemedabad	Alternate Route	347	64	6 Hr 7 Min	Project road alternate has minimum travel time and shortest road
	Udaipur- Idar - Himmatnagar- Ahemedabad	Alternate Route	308	50	6 Hr 8 Min	
	Udaipur- Rishabhdeo- Shamlaji- Ahemedabad	Project Road	262	49	5 Hr 21 Min	
2	Delhi- Jaipur- Mandsaur - Banswara- Vadodara	Alternate Route	1140	57	19 Hr 50 Min	Project road alternate has minimum travel time and shortest road
	Delhi- Sikar- Mt. Abu - Ahemedabad- Vadodara	Alternate Route	1016	57	17 Hr 54 Min	
	Delhi- Jaipur- Udaipur - Vadodara	Project Road	1003	58	17 Hr 54 Min	

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. Further, it may be noted that since the project highway has already been commissioned and has a tolling history, the current traffic traversing the project corridor already factors in traffic diversion (if any) that may have taken place. Further after completion of six laning, level of service would improve on project corridor, and this would create favorable conditions for traffic.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Udaipur to Gujarat Border section of NH-8 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = k x Log (EI) + A

Where,

P = Number of Vehicles (Mode wise)

EI = Economic Indicator

A = Regression constant

k = Elasticity coefficient (Regression coefficient)

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across the state of Rajasthan. Toll plazas at Khondi Obri is in the state of Rajasthan but the traffic on project stretch has certain contribution from other states as well. For elasticity calculations, working data from such states in addition to Rajasthan has been analyzed.

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-1 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	57192	591069	4.76	5.77		
2013	58441	659542	4.77	5.82	2%	
2014	61053	733916	4.79	5.87	4%	
2015	64496	814079	4.81	5.91	6%	
2016	68565	899307	4.84	5.95	6%	
2017	71394	988391	4.85	5.99	4%	4.55%

Regression analysis of same is given in figure below.

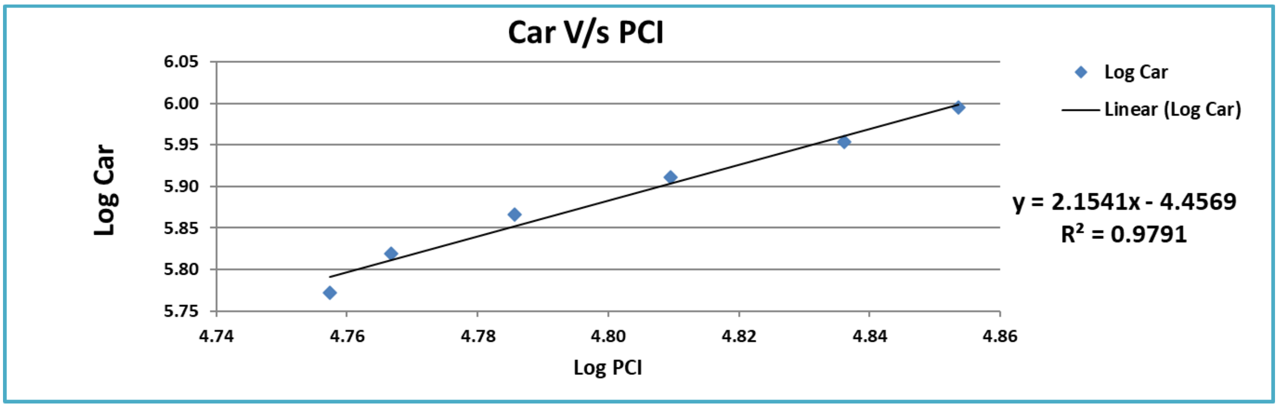

Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-2 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	68548437	83345	7.84	4.92		
2013	69783885	88616	7.84	4.95	2%	
2014	71016445	93892	7.85	4.97	2%	
2015	72245688	97650	7.86	4.99	2%	
2016	73471198	102818	7.87	5.01	2%	
2017	74692571	108680	7.87	5.04	2%	1.73%

Regression analysis of same is given in figure below.

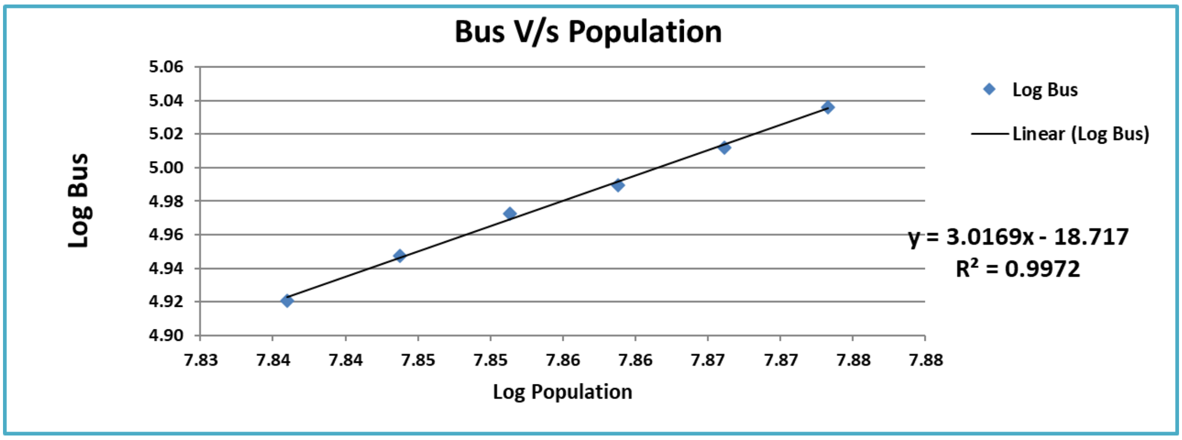

Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

Elasticity of LCV has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : LCV Vs NSDP Rajasthan

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth
2012	395331	69509	5.60	4.84		
2013	409802	76396	5.61	4.88	4%	
2014	434292	33379	5.64	4.52	6%	
2015	465408	91787	5.67	4.96	7%	
2016	501922	99763	5.70	5.00	8%	6.16%

The following figure depicts regression analysis and extrapolation.

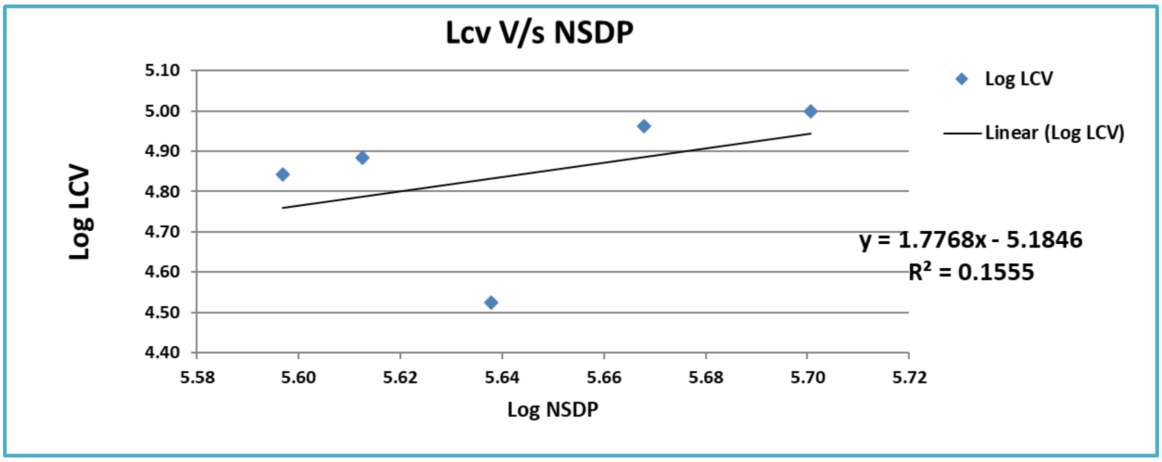

Figure 5-3 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Rajasthan.

Elasticity of Goods Traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-4 : GOODS Traffic Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth
2012	395331	362028	5.60	5.56		
2013	409802	401983	5.61	5.60	4%	
2014	434292	434379	5.64	5.64	6%	
2015	465408	472365	5.67	5.67	7%	
2016	501922	517604	5.70	5.71	8%	
2017	530172	561158	5.72	5.75	6%	6.06%

Following figure depict regression analysis and extrapolation.

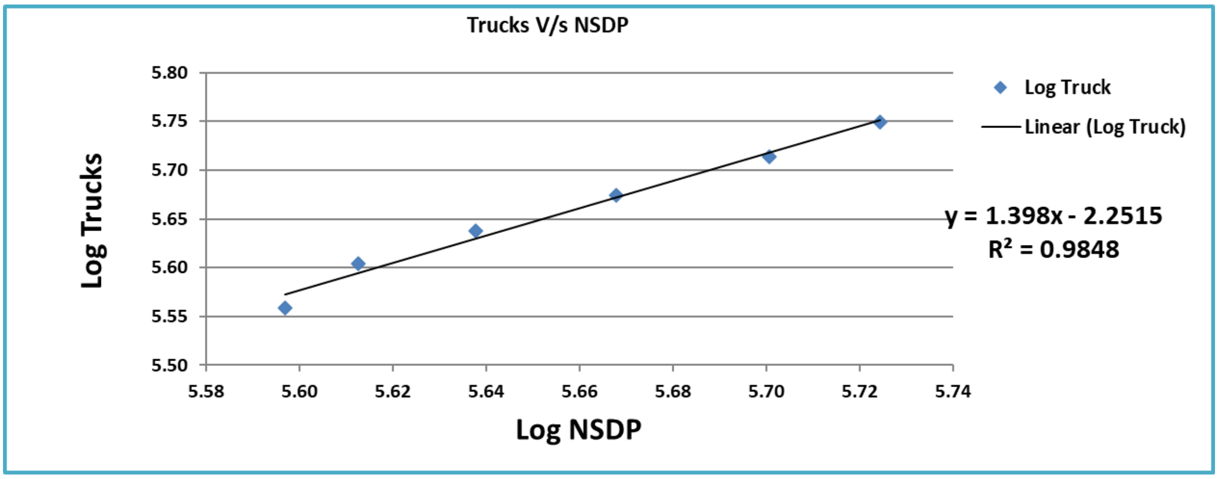

Figure 5-4 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Rajasthan.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-5 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Rajasthan	Car/Jeep	PCI	y = 2.1541x + -4.4569	R^2 = 0.9791	2.1541	4.55%	9.79%	Good Regression
	Bus	Population	y = 3.0169x - -18.7174	R^2 = 0.9972	3.0169	1.73%	5.22%	Good Regression
	LCV	NSDP	y = 1.7768x - -5.1846	R^2 = 0.1555	1.7768	6.16%	10.95%	Poor Regression
	Truck	NSDP	y = 1.398x - -2.2515	R^2 = 0.9848	1.3980	6.06%	8.46%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-6 : Per Capita Income Vs Car Gujarat

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	87481	1411898	4.94	6.15		
2013	96683	1602129	4.99	6.20	11%	
2014	102589	1771298	5.01	6.25	6%	
2015	111370	2008748	5.05	6.30	9%	
2016	120683	2260084	5.08	6.35	8%	
2017	129738	2527537	5.11	6.40	8%	8.21%

Regression analysis of same is given in figure below.

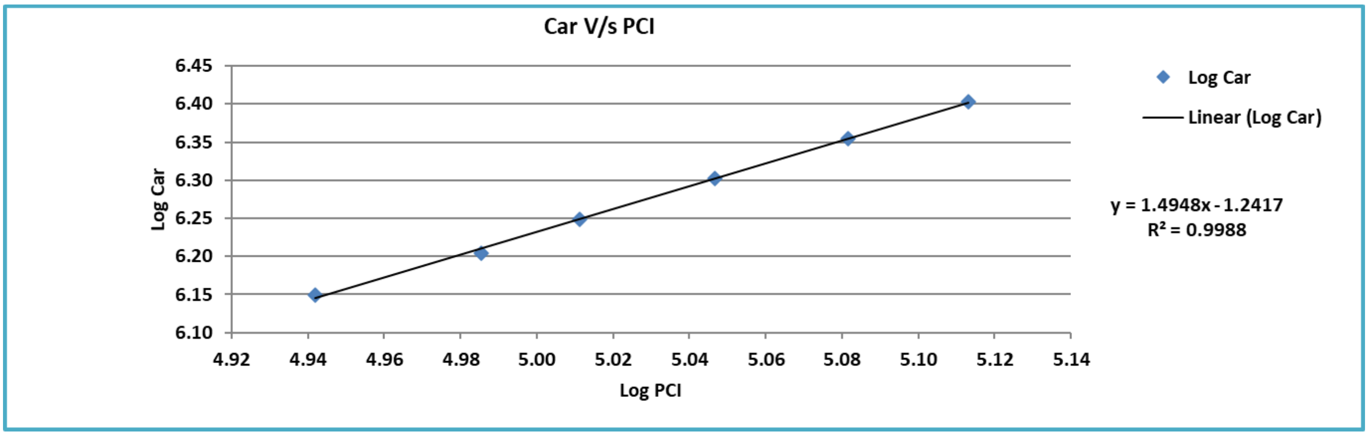

Figure 5-5 : Regression and Elasticity PCI vs. Car – Extrapolation Gujarat

Table 5-7 : Population Vs Bus Gujarat

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	60439692	67546	7.78	4.83		
2013	61563037	70615	7.79	4.85	2%	
2014	62684375	72998	7.80	4.86	2%	
2015	63803304	76435	7.80	4.88	2%	
2016	64919427	82734	7.81	4.92	2%	
2017	66032362	74855	7.82	4.87	2%	1.79%

Regression analysis of same is given in figure below.

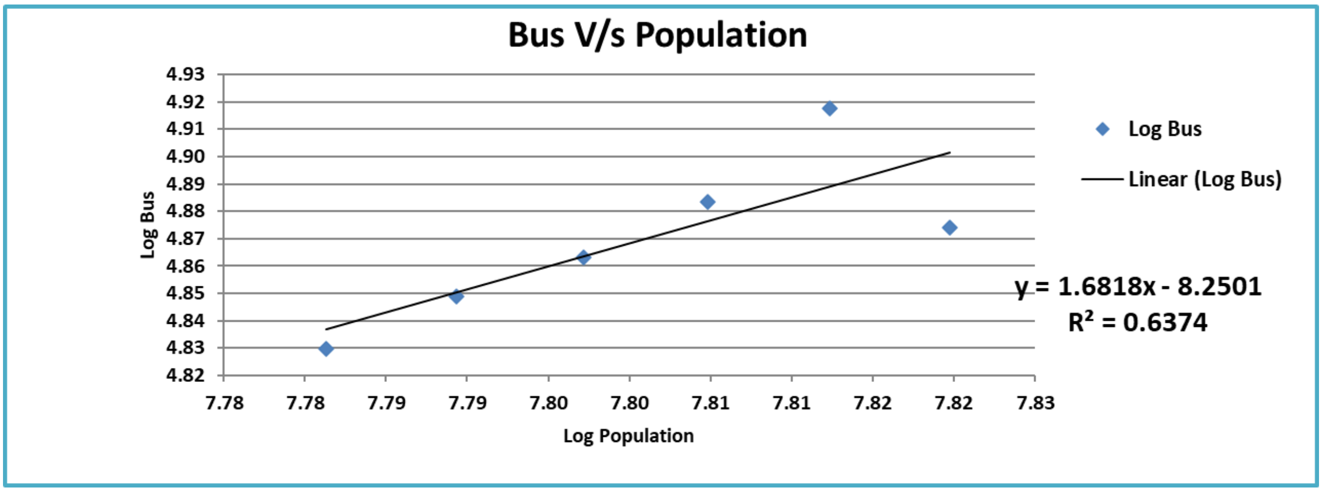

Figure 5-6 : Regression and Elasticity Population vs. Bus – Extrapolation Gujarat

Elasticity of LCV has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-8 : LCV Vs NSDP Gujarat

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	532809	448958	5.73	5.65		
2013	596659	499277	5.78	5.70	12%	
2014	641489	542918	5.81	5.73	8%	
2015	705629	589984	5.85	5.77	10%	
2016	774775	633599	5.89	5.80	10%	9.82%

The following figure depicts regression analysis and extrapolation.

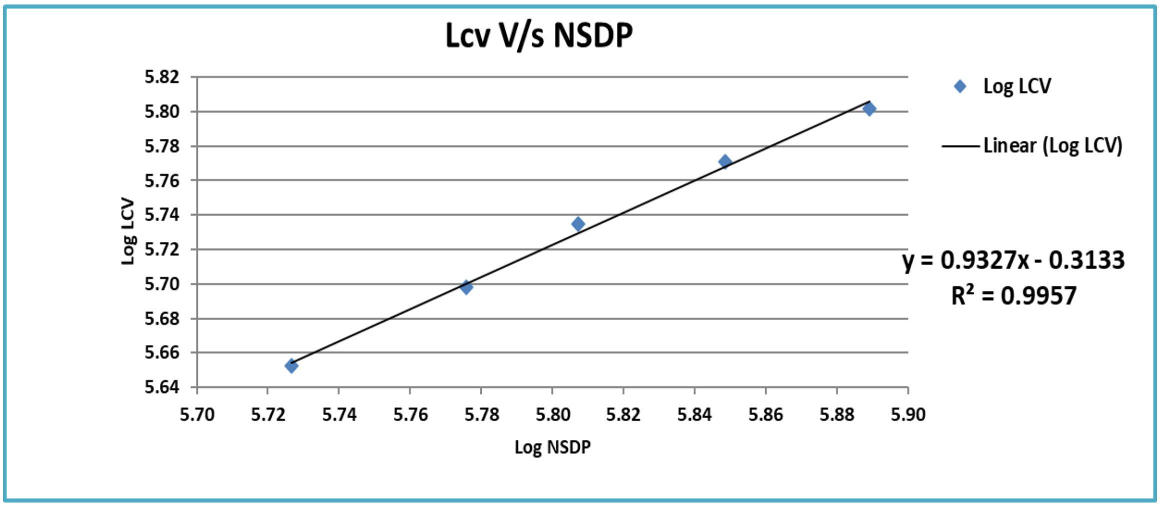

Figure 5-7 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Gujarat.

Elasticity of Goods Traffic has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-9 : GOODS Traffic Vs NSDP Gujarat

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	532809	301533	5.73	5.48		
2013	596659	319207	5.78	5.50	12%	
2014	641489	332185	5.81	5.52	8%	
2015	705629	352225	5.85	5.55	10%	
2016	774775	375265	5.89	5.57	10%	
2017	843930	396061	5.93	5.60	9%	9.64%

The following figure depicts regression analysis and extrapolation.

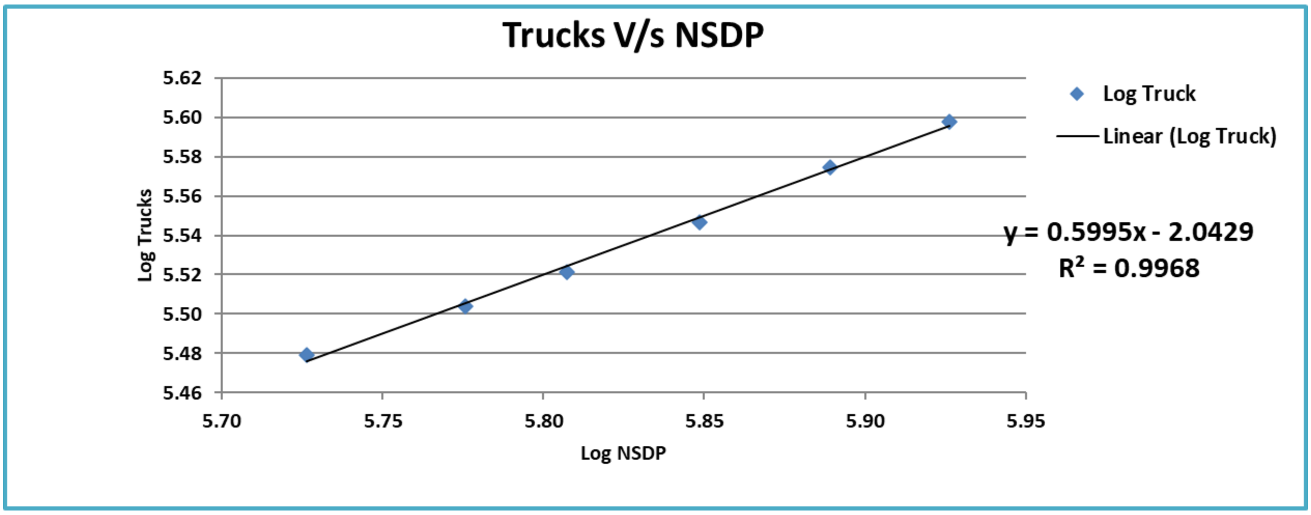

Figure 5-8 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Gujarat.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-10 : Summary Regression Analysis Gujarat

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Gujarat	Car/Jeep	PCI	y = 1.4948x - - 1.2417	R^2 = 0.9988	1.4948	8.21%	12.27%	Good Regression
	Bus	Population	y = 1.6818x - - 8.2501	R^2 = 0.6374	1.6818	1.79%	3.00%	Fair Regression
	LCV	NSDP	y = 0.9327x - - 0.3133	R^2 = 0.9957	0.9327	9.82%	9.16%	Good Regression
	Truck	NSDP	y = 0.5995x - - 2.0429	R^2 = 0.9968	0.5995	9.64%	5.78%	Good Regression

The economic model for predicting growth is a good tool, however other local, regional, and national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trends of growth. Project stretch of Udaipur to Gujarat on NH-8 is under tolling operation with current concessionaire and has three year of tolling history from 2017-18 (Part year). As traffic data available with the project concessionaire is of less than three years, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

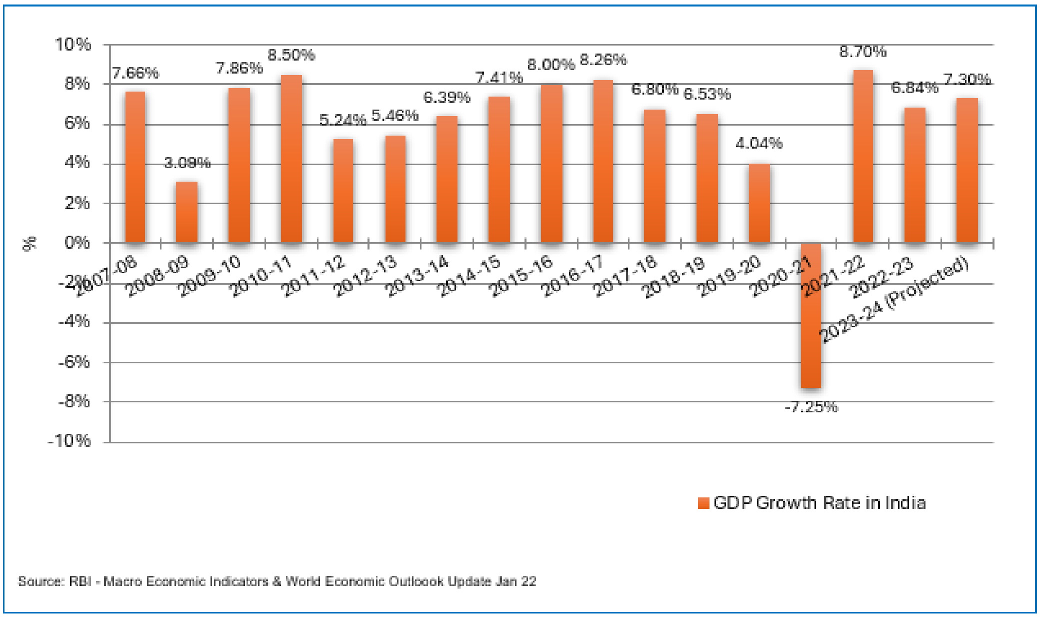

Figure 5-9 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. The World Economic Outlook update also has predicted a growth rate of about 7.5 % in the year 2022-23.

5.6 Developments along and around the Project Corridor & State

Project stretch passes through mineral rich belt of marble and minerals.

Tourism, agriculture, and mineral industries contribute to Udaipur’s diverse economic base. Udaipur sees major tourist footfall throughout the year owing to its picturesque landscape, lakes, and historic palaces and architecture. Shamlaji is a major Hindu pilgrimage dedicated to God Vishnu. Each year an annual fair is held in October which attracts huge crowds from the surrounding region. Udaipur district is rich in lead, zinc, silver, phosphate, calcite, copper and limestone minerals. Udaipur is known for its marble which is mined, processed, and exported across the world. Nathdwara in the north of asset is one of biggest extractors of marble and limestone minerals. Hindustran Zinc, which is the world’s second largest zinc producer, is based out of Udaipur.

Rishbhdeo is one of the major religious and industrial settlement on project corridor. This region has more than 200 mines of green marble. Rishabhdeo is the largest miner of green marble.9 0 per-cent of green marble in the world is produced in Rishabhdev. The turnover of marble industry is more than 500 crores. It also gives employment to many labourers. Beyond this the town also has spinning and weaving mill by lnjbhilwara group. Thus, it gives employment to 10000 local workers. The presence of temple also leads to income of many people.

The growth of Rajasthan has been comparable to the national average economic growth. Rajasthan is rich in natural resources and benefits from its strategic geographic location in India. The state is pre-eminent in quarrying, mining in India and has been a leader in crude oil extraction over the past the few years. Moreover, Rajasthan is also a relevant tourism attractor in India. Considering the scenario, it may be assumed that the traffic growth on the project highway would remain high and there are minimal risks in terms of growth.

Table 5-11 : GDP of India, Rajasthan and other important states

Year	India (GDP)	Bihar	Haryana	Madhya Pradesh	Maharashtra	Odisha	Punjab	Rajasthan	Uttar Pradesh	Uttarakhand	West Bengal	Delhi
1980-81	12336	514	357	623	1464	529	504	560	1631	138	830	269
1981-82	13030	543	371	639	1498	528	551	607	1670	141	808	291
1982-83	13411	548	394	668	1556	497	568	620	1800	152	840	328
1983-84	14464	601	402	702	1654	597	578	761	1871	158	939	320
1984-85	15037	658	418	668	1675	569	623	706	1900	161	964	333
1985-86	15663	672	493	726	1807	635	670	704	1975	167	1005	386
1986-87	16339	725	493	694	1832	643	694	771	2060	174	1045	411
1987-88	16917	685	484	789	1955	623	730	718	2154	182	1101	447
1988-89	18635	772	602	847	2159	754	769	1014	2434	206	1148	486
1989-90	19778	759	610	865	2515	805	834	993	2502	212	1188	531
1990-91	20824	831	674	987	2629	668	849	1149	2651	224	1251	553
1991-92	21122	784	688	916	2620	753	888	1061	2662	225	1349	638
1992-93	22254	737	688	983	3017	740	930	1220	2690	228	1389	660
1993-94	23519	755	719	1088	3349	788	970	1121	2757	233	1490	705
1994-95	25023	842	771	1107	3414	826	995	1325	2901	254	1594	790
1995-96	26846	712	787	1174	3791	864	1032	1374	2995	251	1713	804
1996-97	28987	893	879	1252	3941	804	1107	1535	3327	267	1832	915
1997-98	30234	850	887	1318	4158	920	1137	1721	3292	270	1985	1063
1998-99	32255	904	934	1405	4324	948	1203	1797	3316	274	2112	1116
1999-00	34837	950	1002	1552	4735	1008	1267	1801	3440	274	2264	1170
2000-01	36282	1106	1081	1426	4589	982	1309	1743	3511	308	2343	1215
2001-02	38236	1043	1165	1528	4751	1042	1326	1941	3575	323	2512	1262
2002-03	39719	1175	1236	1449	5079	1034	1348	1708	3690	353	2600	1359
2003-04	42883	1099	1358	1611	5471	1185	1433	2251	3885	381	2753	1433
2004-05	45906	1238	1475	1664	5948	1340	1504	2196	4079	431	2936	1588
2005-06	50257	1207	1608	1748	6810	1399	1577	2344	4317	492	3121	1752
2006-07	55066	1416	1791	1907	7748	1574	1748	2620	4660	551	3366	1969
2007-08	60199	1489	1931	1997	8650	1708	1899	2739	4959	648	3627	2191
2008-09	64248	1716	2080	2250	8786	1837	2004	2969	5336	716	3774	2464
2009-10	69769	1798	2340	2463	9634	1852	2132	3142	5668	839	4067	2667
2010-11	75987	2073	2498	2592	10732	1968	2270	3614	6120	927	4313	2888
2011-12	81069	2285	2712	2824	11222	2042	2392	3953	6451	1020	4471	3147
2012-13	85463	2369	2894	3069	11842	2163	2518	4098	6736	1095	4838	3342
2013-14	90636	2469	3142	3226	12671	2331	2675	4343	7075	1178	5247	3565
2014-15	97121	2557	3314	3394	13322	2359	2777	4656	7297	1257	5633	3882
2015-16	105033	2749	3612	3597	14417	2557	2926	4981	7894	1355	-	4291
2016-17	112476	3033	3927	4129	15744	2828	3095	5352	8457	1448	-	4658
2017-18	119762	-	-	4432	-	3029	-	5736	9011	1547	-	5035
Growth 1981-2018	6.34	5.05	6.88	5.44	6.82	4.83	5.17	6.49	4.73	6.75	5.79	8.24
Growth 1994-2018	7.02	6.23	7.66	6.03	6.96	5.77	5.17	7.04	5.06	8.20	6.54	8.53

Growth 2000-2018	7.10	7.07	8.37	6.00	7.32	6.30	5.40	6.65	5.50	10.10	6.27	8.45

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as below. The rate of growth is moderate in light of overall regional trends. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, the rate of growth diminishes. The same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-12 : Recommended Growth Rates Optimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.44%	8.82%	8.21%	7.60%	7.01%	6.43%
Bus	5.26%	4.95%	4.64%	4.35%	4.07%	3.79%
LCV	3.55%	3.09%	2.64%	2.19%	1.75%	1.31%
2- Axle	3.73%	3.35%	2.96%	2.58%	2.21%	1.84%
3 - Axle	5.82%	5.20%	4.59%	3.99%	3.39%	2.80%
4 to6 Axle	6.52%	5.82%	5.13%	4.45%	3.78%	3.12%
7 and Above Axle	6.52%	5.82%	5.13%	4.45%	3.78%	3.12%

Table 5-13 : Recommended Growth Rates Pessimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.94%	8.32%	7.71%	7.10%	6.51%	5.93%
Bus	4.76%	4.45%	4.14%	3.85%	3.57%	3.29%
LCV	3.05%	2.59%	2.14%	1.69%	1.25%	0.81%
2- Axle	3.23%	2.85%	2.46%	2.08%	1.71%	1.34%
3 - Axle	5.32%	4.70%	4.09%	3.49%	2.89%	2.30%
4 to6 Axle	6.02%	5.32%	4.63%	3.95%	3.28%	2.62%
7 and Above Axle	6.02%	5.32%	4.63%	3.95%	3.28%	2.62%

Table 5-14 : Recommended Growth Rates Most Likely

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.19%	8.57%	7.96%	7.35%	6.76%	6.18%
Bus	5.01%	4.70%	4.39%	4.10%	3.82%	3.54%

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
LCV	3.30%	2.84%	2.39%	1.94%	1.50%	1.06%
2- Axle	3.48%	3.10%	2.71%	2.33%	1.96%	1.59%
3 - Axle	5.57%	4.95%	4.34%	3.74%	3.14%	2.55%
4 to6 Axle	6.27%	5.57%	4.88%	4.20%	3.53%	2.87%
7 and Above Axle	6.27%	5.57%	4.88%	4.20%	3.53%	2.87%

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza - 348.450 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	6220	777	894	2213	1934	4868	13	16919	44472
2024-25	6808	804	941	2296	2047	5185	14	18095	47262
2025-26	7408	829	988	2373	2153	5486	15	19252	49948
2026-27	8062	854	1036	2452	2266	5805	16	20491	52800
2027-28	8773	880	1087	2534	2384	6143	17	21818	55828
2028-29	9546	907	1140	2619	2508	6501	18	23239	59043
2029-30	10388	934	1196	2706	2638	6879	19	24760	62450
2030-31	11241	959	1251	2786	2759	7232	20	26248	65702
2031-32	12163	984	1309	2869	2885	7603	21	27834	69136
2032-33	13161	1010	1369	2954	3017	7993	22	29526	72764
2033-34	14240	1036	1433	3041	3156	8404	23	31333	76606
2034-35	15408	1063	1500	3130	3301	8836	24	33262	80666
2035-36	16580	1087	1566	3210	3432	9229	25	35129	84478
2036-37	17840	1111	1635	3293	3569	9640	26	37114	88495
2037-38	19196	1135	1706	3378	3711	10070	27	39223	92720
2038-39	20656	1160	1780	3465	3858	10518	28	41465	97162
2039-40	22227	1185	1857	3554	4011	10986	29	43849	101838
2040-41	23785	1206	1932	3632	4147	11402	30	46134	106171
2041-42	25454	1227	2010	3712	4288	11834	31	48556	110717
2042-43	27240	1248	2091	3794	4433	12281	32	51119	115475

Table 6-2 : Total Tollable Traffic @ Toll Plaza - Chainage 348.450 KM
(Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	6220	777	894	2213	1934	4868	13	16919	44472
2024-25	6776	800	937	2284	2036	5160	13	18006	47026
2025-26	7339	820	979	2349	2132	5435	14	19068	49470
2026-27	7949	841	1023	2416	2233	5724	15	20201	52052
2027-28	8610	862	1068	2484	2338	6029	16	21407	54776
2028-29	9325	884	1115	2554	2448	6350	17	22693	57654
2029-30	10101	906	1165	2627	2564	6688	18	24069	60705
2030-31	10879	925	1213	2692	2669	6998	19	25395	63565
2031-32	11718	945	1263	2758	2778	7322	20	26804	66572
2032-33	12621	965	1315	2826	2892	7661	21	28301	69737
2033-34	13593	985	1369	2895	3011	8016	22	29891	73067
2034-35	14640	1006	1425	2966	3134	8387	23	31581	76569
2035-36	15680	1024	1479	3027	3243	8719	24	33196	79807
2036-37	16794	1042	1535	3090	3357	9063	25	34906	83199
2037-38	17987	1060	1594	3155	3474	9421	26	36717	86758
2038-39	19264	1078	1655	3221	3595	9793	27	38633	90484
2039-40	20632	1096	1719	3288	3720	10180	28	40663	94393
2040-41	21976	1110	1780	3344	3827	10514	29	42580	97938
2041-42	23408	1124	1843	3401	3937	10859	30	44602	101638
2042-43	24933	1138	1909	3459	4051	11215	31	46736	105504

Traffic projections for Most Likely scenario is given as under

Table 6-3 : Total Tollable Traffic @ Toll Plaza - Chainage 348.450 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	6220	777	894	2213	1934	4868	13	16919	44472
2024-25	6791	802	938	2290	2042	5173	14	18050	47146
2025-26	7373	824	982	2360	2143	5461	15	19158	49706
2026-27	8004	848	1027	2433	2249	5766	16	20343	52422
2027-28	8690	872	1075	2508	2361	6087	17	21610	55298
2028-29	9435	897	1125	2585	2478	6426	18	22964	58343
2029-30	10243	922	1178	2664	2601	6784	19	24411	61569
2030-31	11057	943	1229	2737	2714	7115	20	25815	64619
2031-32	11936	965	1282	2811	2832	7462	21	27309	67832
2032-33	12886	988	1338	2887	2955	7826	22	28902	71224
2033-34	13911	1012	1397	2965	3083	8208	23	30599	74804
2034-35	15018	1036	1458	3045	3217	8610	24	32408	78585
2035-36	16122	1056	1517	3115	3337	8972	25	34144	82100
2036-37	17308	1076	1579	3188	3461	9349	26	35987	85794
2037-38	18581	1097	1644	3262	3590	9741	27	37942	89671
2038-39	19947	1118	1712	3338	3724	10151	28	40018	93752
2039-40	21414	1139	1783	3416	3863	10578	29	42222	98040
2040-41	22863	1157	1851	3483	3984	10951	30	44319	101967
2041-42	24410	1175	1922	3551	4109	11337	31	46535	106075
2042-43	26061	1193	1996	3620	4238	11738	32	48878	110378

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Udaipur – Gujarat Border on NH-8 project stretch, the Target Date and Target Traffic are defined as under:

Target Date – 21st September 2026

Target Traffic - 61435 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. The probable extension of the concession period is estimated according to article 29 of the concession agreement which comes to about a year. Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	61435	52475	-15%	22%	20%	21	4.2

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	61435	52859	-14%	21%	20%	21	4.2

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	61435	52099	-15%	23%	20%	21	4.2

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Udaipur- Gujarat Border section of NH-8 is based on the old toll policy. As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued at fee 30 time the single journey fee.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van I - Rs. 275 per month
    b) Other local Commercial at 50% of the regular single journey toll fee

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate X} \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \text{X } 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

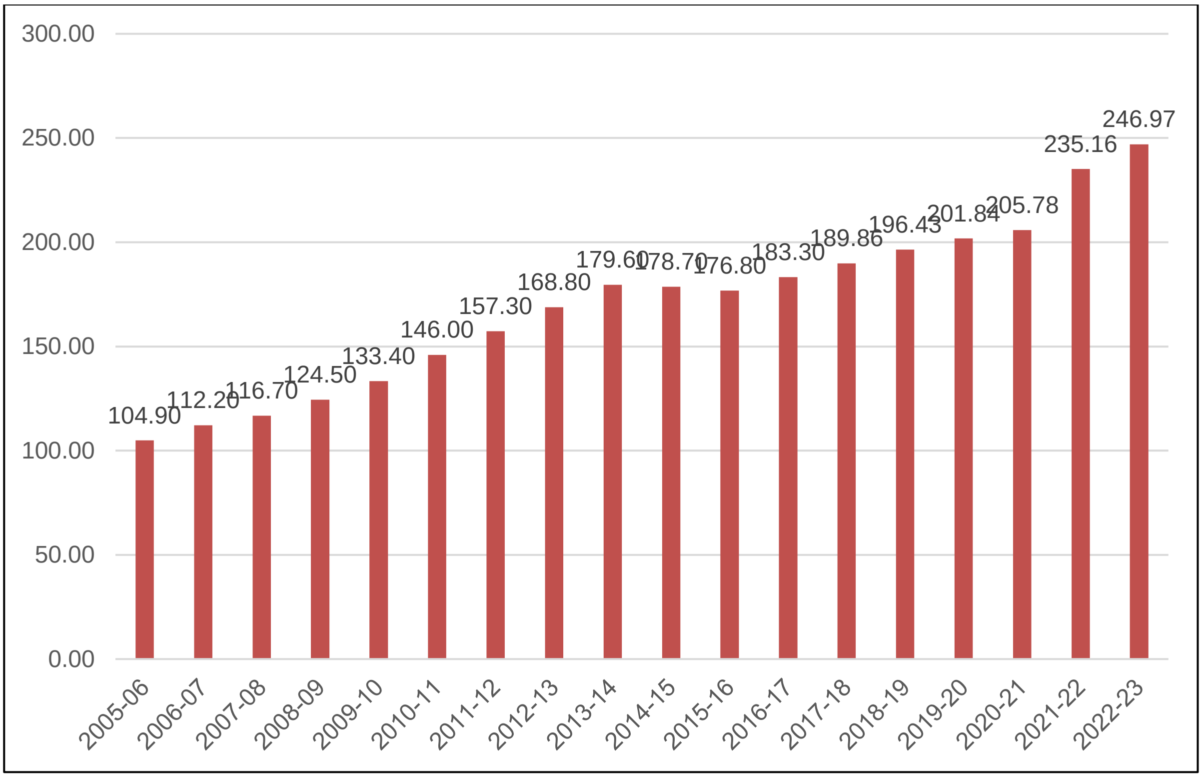

Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey @ Km TP-348.450 KM

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2023-24	175	280	585	585	635	915	1115
2024-25	175	285	600	600	655	940	1145
2025-26	185	300	630	630	685	985	1200
2026-27	195	315	660	660	720	1035	1260
2027-28	205	330	695	695	755	1090	1325
2028-29	215	350	730	730	795	1145	1390
2029-30	225	365	765	765	835	1200	1465
2030-31	240	385	805	805	880	1265	1540
2031-32	250	405	850	850	925	1330	1620
2032-33	265	425	890	890	975	1400	1700
2033-34	275	450	940	940	1025	1470	1790
2034-35	290	470	985	985	1075	1550	1885
2035-36	305	495	1040	1040	1135	1630	1985
2036-37	325	520	1095	1095	1195	1715	2090
2037-38	340	550	1150	1150	1255	1805	2200
2038-39	360	580	1215	1215	1325	1905	2315
2039-40	380	610	1280	1280	1395	2005	2440
2040-41	400	645	1345	1345	1470	2110	2570
2041-42	420	675	1420	1420	1550	2225	2710
2042-43	440	715	1495	1495	1630	2345	2855

Table 7-3 : Toll Rates for Return Journey @ TP-348.450 KM

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2023-24	260	420	875	875	955	1375	1675
2024-25	265	430	900	900	980	1410	1715
2025-26	280	450	945	945	1030	1480	1800
2026-27	295	475	990	990	1080	1555	1890
2027-28	310	495	1040	1040	1135	1630	1985
2028-29	325	520	1095	1095	1195	1715	2090
2029-30	340	550	1150	1150	1255	1805	2195
2030-31	355	575	1210	1210	1320	1895	2310
2031-32	375	605	1270	1270	1385	1995	2430
2032-33	395	640	1340	1340	1460	2100	2555
2033-34	415	670	1405	1405	1535	2205	2685
2034-35	440	705	1480	1480	1615	2320	2825
2035-36	460	745	1560	1560	1700	2445	2975
2036-37	485	785	1640	1640	1790	2575	3135

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2037-38	510	825	1730	1730	1885	2710	3300
2038-39	540	870	1820	1820	1985	2855	3475
2039-40	565	915	1915	1915	2090	3005	3660
2040-41	595	965	2020	2020	2205	3170	3855
2041-42	630	1015	2130	2130	2325	3340	4065
2042-43	665	1070	2245	2245	2450	3520	4285

Table 7-4 : Toll Rates for Monthly Pass Local @ TP-348.450 KM

Year	Car
2023-24	330
2024-25	340
2025-26	355
2026-27	375
2027-28	390
2028-29	410
2029-30	435
2030-31	455
2031-32	480
2032-33	505
2033-34	530
2034-35	560
2035-36	585
2036-37	620
2037-38	650
2038-39	685
2039-40	720
2040-41	760
2041-42	800
2042-43	845

Table 7-5 : Toll Rates for Monthly Pass @ TP-348.450 KM

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2023-24	5750	9290	19470	19470	21240	30530	37170
2024-25	5895	9520	19950	19950	21765	31285	38085
2025-26	6190	10000	20955	20955	22860	32860	40005
2026-27	6505	10505	22015	22015	24015	34525	42025
2027-28	6835	11040	23130	23130	25235	36275	44160
2028-29	7185	11605	24310	24310	26520	38125	46415
2029-30	7550	12195	25555	25555	27880	40075	48790
2030-31	7940	12825	26870	26870	29315	42135	51300
2031-32	8350	13485	28260	28260	30825	44315	53945
2032-33	8780	14185	29725	29725	32425	46610	56745
2033-34	9240	14925	31270	31270	34115	49040	59700
2034-35	9725	15705	32910	32910	35900	51605	62825
2035-36	10235	16530	34640	34640	37790	54320	66130

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2036-37	10775	17405	36465	36465	39780	57185	69620
2037-38	11345	18330	38400	38400	41890	60220	73310
2038-39	11950	19305	40445	40445	44120	63425	77215
2039-40	12590	20335	42605	42605	46480	66815	81340
2040-41	13265	21425	44895	44895	48975	70400	85705
2041-42	13980	22580	47315	47315	51615	74195	90325
2042-43	14735	23805	49870	49870	54405	78210	95210

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2042-43 years starting from the year 2023-24 are shown in tables below.

Table 7-6 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	Total
2023-24	311.30	**311.30**
2024-25	337.93	**337.93**
2025-26	374.51	**374.51**
2026-27	415.70	**415.70**
2027-28	463.27	**463.27**
2028-29	513.08	**513.08**
2029-30	568.54	**568.54**
2030-31	630.35	**630.35**
2031-32	698.56	**698.56**
2032-33	771.45	**771.45**
2033-34	851.72	**851.72**
2034-35	943.40	**943.40**
2035-36	1041.88	**1041.88**
2036-37	1146.12	**1146.12**
2037-38	1261.10	**1261.10**
2038-39	1394.16	**1394.16**
2039-40	1541.23	**1541.23**
2040-41	1685.00	**1685.00**
2041-42	1849.98	**1849.98**
2042-43	2028.74	**2028.74**

Table 7-7 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	Total
2023-24	311.30	**311.30**
2024-25	336.21	**336.21**
2025-26	370.88	**370.88**
2026-27	409.72	**409.72**
2027-28	454.47	**454.47**
2028-29	501.07	**501.07**
2029-30	552.65	**552.65**
2030-31	609.81	**609.81**
2031-32	672.54	**672.54**
2032-33	739.28	**739.28**
2033-34	812.29	**812.29**
2034-35	895.47	**895.47**
2035-36	984.17	**984.17**
2036-37	1077.43	**1077.43**
2037-38	1179.75	**1179.75**
2038-39	1298.03	**1298.03**
2039-40	1427.93	**1427.93**
2040-41	1553.63	**1553.63**
2041-42	1697.48	**1697.48**
2042-43	1852.60	**1852.60**

Table 7-8 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	Total
2023-24	311.30	**311.30**
2024-25	337.04	**337.04**
2025-26	372.65	**372.65**
2026-27	412.64	**412.64**
2027-28	458.82	**458.82**
2028-29	506.96	**506.96**
2029-30	560.37	**560.37**
2030-31	619.86	**619.86**
2031-32	685.20	**685.20**
2032-33	754.88	**754.88**
2033-34	831.51	**831.51**
2034-35	918.86	**918.86**
2035-36	1012.28	**1012.28**
2036-37	1110.92	**1110.92**
2037-38	1219.48	**1219.48**
2038-39	1344.98	**1344.98**
2039-40	1483.37	**1483.37**

Year	TP-1	Total
2040-41	1617.87	**1617.87**
2041-42	1771.98	**1771.98**
2042-43	1938.76	**1938.76**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Udaipur to Gujarat Border section of NH-8 in state of Rajasthan is nearing completion of six laning. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the busy and prominent national highway NH-8 which connects Mumbai to Delhi and is part of golden quadrilateral. There are large number of townships, industrial corridors and other business establishments coming up along the project corridor. As discussed, the dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give a positive impact to traffic flow on the project. The following can be considered as major outcomes of the study.

a) There is a good amount of tollable traffic running on the project.

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy.

c) The Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on the above it can be considered a stable healthy project from the traffic and revenue point of view.

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YEDISHI TO AURANGABAD SECTION OF NH-211

(KM 100.000 TO KM 290.200)

IN THE STATE OF MAHARASHTRA

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

GMD CONSULTANTS ★ NAVI MUMBAI ★

MARCH 2024

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YEDISHI TO AURANGABAD SECTION OF NH-211

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under various NHDP Phases.

The project under consideration, four laning of **Yedeshi** to **Aurangabad** section of NH-211 from km 100.000 to km 290.200 is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s YA Tollway Ltd*. (Concessionaire) has been awarded the Project for a concession period of 26 years starting from 1st July 2015. Four laning of project has also been completed in September 2020.

Length of project road is 189.090 Kms. The project road is section of NH-211, is one of the important transportation link in Maharashtra which connects Solapur to Dhule and then at Dhule it can join other important highway like NH-3 (Mumbai – Agra Road) and NH-6 (east-west highway). The project road passes through the important places like Chausala, Beed, Adul, Chitegaon and then Aurangabad. The Project Road passes through the districts of Beed and Aurangabad.

The following figure shows alignment of project road section from Yedeshi to Aurangabad.

Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study & *Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 211 which is now part of NH-52. The national highway 52 was numbered after amalgamating many existing national highways of India.

It connects the important places like Chausala, Beed, Adul, Chitegaon and then Aurangabad. The Project Road passes through the districts of Beed and Aurangabad. Following are the major centers of development around project road.

Project Stretch Description

Like other parts of India rapid ribbon development is happening around these cities on project highway. This also contributes to sustainable traffic growth.

There are three operative toll plazas at project stretch. The first is at Yedeshi at Km 134.000, second at Padalshingi at Km 194.000 and third at Bhokarwadi at Km 254.000. The following figure show project alignment and toll plaza locations.

Figure 2-1 : Project Alignment with Toll Plaza

2.2 Project Corridor Illustration

Four laning of project stretch is complete. The following photographs illustrate the project section along the corridor.

Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Yedeshi - Aurangabad section of NH-211 for years 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22,2022-23 and traffic data from April 2023 to November 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 134.000 Toll Plaza at Pargaon	AADT for Year 2019-20, 2020-2021, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023
2	Km 194.000 Toll Plaza at Padalshingi	AADT for Year 2019-20, 2020-2021, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023
3	Km 254.000 Toll Plaza at Maliwadi	AADT for Year 2019-20, 2020-2021, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2019-20 ,2020-2021, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023

All toll plazas are located in Maharashtra.

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below .

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Minibus /LCV
- Bus
- Truck /
- 3 Axle commercial vehicle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for year 2019-20 ,2020-21, 2021-22, 2022-23 and from April 2023 to November 2023.
Since the traffic data available for this update is for only eight months, from April 2023 to November 20223, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current eight months to arrive at Annual Average Daily Traffic of base year 2023-24. Same corrected traffic is used for future projections and revenue calculations. Following table shows historical traffic on project stretch and Annual Average Daily Traffic (AADT) for year 2023-24.

Table 3-3 : Traffic Data at Pargaon Toll Plaza at Km 134.000

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	1641	1439	2426	2863	3388
2	Minibus /LCV	658	482	257	317	332
3	Bus	199	109	110	215	244
4	Truck	635	704	786	988	1078
5	3-Axle Commercial vehicle	793	845	876	967	924
6	Multi axle	1081	1284	1567	2164	2089
7	Oversize Vehicle	0	50	74	31	29
	Total	**5007**	**4913**	**6096**	**7544**	**8084**

Table 3-4 : Traffic Data at Padalshingi Toll Plaza at Km 194.000

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	4114	3166	4969	5458	6558
2	Minibus /LCV	1095	883	383	451	483
3	Bus	473	260	252	478	547
4	Truck	788	839	891	1159	1324
5	3-Axle Commercial vehicle	944	1049	1098	1119	1145
6	Multi axle	1134	1363	1641	2290	2270
7	Oversize Vehicle	1	60	65	29	28
	Total	**8549**	**7620**	**9299**	**10985**	**12357**

Table 3-5 : Traffic Data at Maliwadi Toll Plaza at Km 254.000

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	3089	2492	3992	4717	5799
2	Minibus /LCV	687	546	192	295	353
3	Bus	347	177	177	341	388
4	Truck	547	579	567	892	1075
5	3-Axle Commercial vehicle	679	737	718	841	928
6	Multi axle	866	1046	1164	1914	1918

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
7	Oversize Vehicle	1	47	52	23	21
	Total	**6216**	**5623**	**6862**	**9023**	**10484**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in Table 3-6.

Table 3-6 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-7 : Traffic in PCU at Project Stretch

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-2020	Km 134.000 Toll Plaza at Pargaon	5007	12373	2.47
	Km 194.000 Toll Plaza at Padalshingi	8549	17479	2.04
	Km 254.000 Toll Plaza at Maliwadi	6216	12740	2.05
2020-2021	Km 134.000 Toll Plaza at Pargaon	4913	13136	2.67
	Km 194.000 Toll Plaza at Padalshingi	7620	17339	2.28
	Km 254.000 Toll Plaza at Maliwadi	5623	12706	2.26
2021-2022	Km 134.000 Toll Plaza at Pargaon	6096	15511	2.54
	Km 194.000 Toll Plaza at Padalshingi	9299	19945	2.14
	Km 254.000 Toll Plaza at Maliwadi	6862	14138	2.06
2022-2023	Km 134.000 Toll Plaza at Pargaon	7544	19724	2.61
	Km 194.000 Toll Plaza at Padalshingi	10985	24840	2.26
	Km 254.000 Toll Plaza at	9023	20097	2.23

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
	Maliwadi			
2023-2024	Km 134.000 Toll Plaza at Pargaon	8084	20153	2.49
	Km 194.000 Toll Plaza at Padalshingi	12357	26677	2.16
	Km 254.000 Toll Plaza at Maliwadi	10484	22233	2.12

It can be observed from above that project traffic has PCU index 2 to 2.6 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at three toll plaza locations.

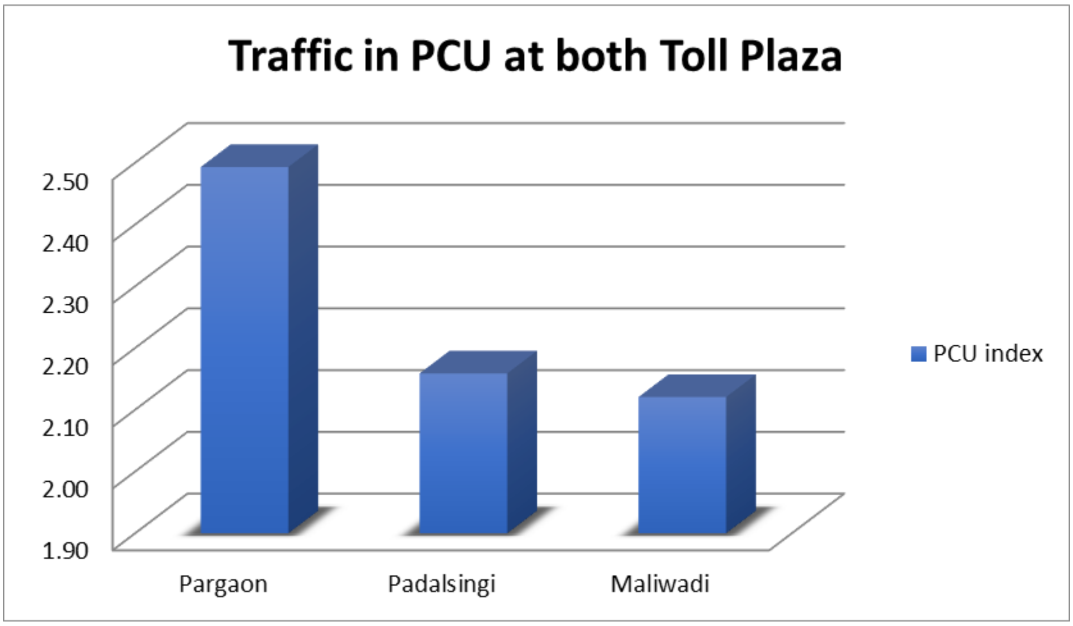

Figure 3-1 : Comparison of PCU Index

It can be observed that PCU index is consistent at all three toll plaza locations.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

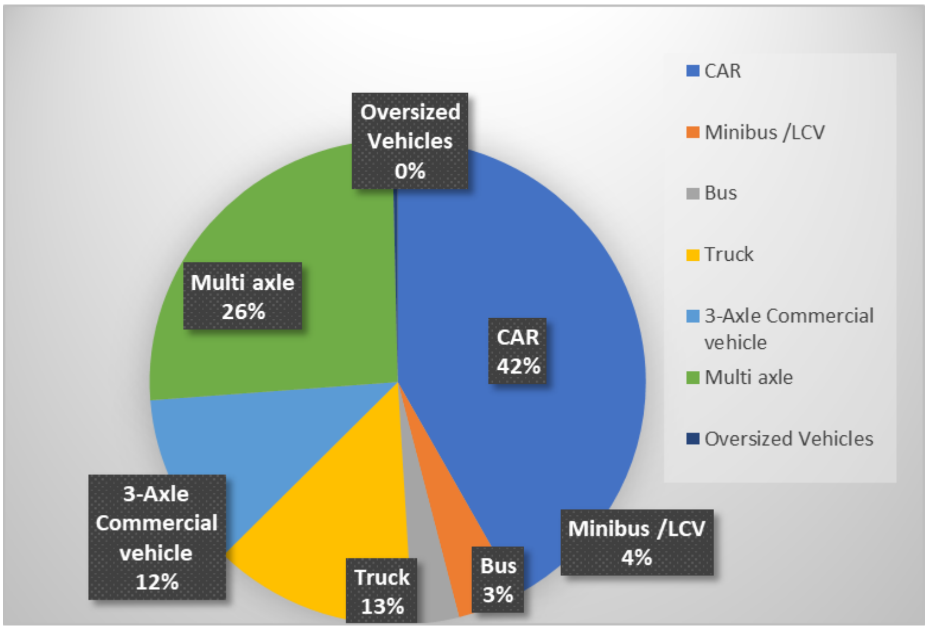

Figure 3-2: Model split of tollable vehicle @ Km 134.000

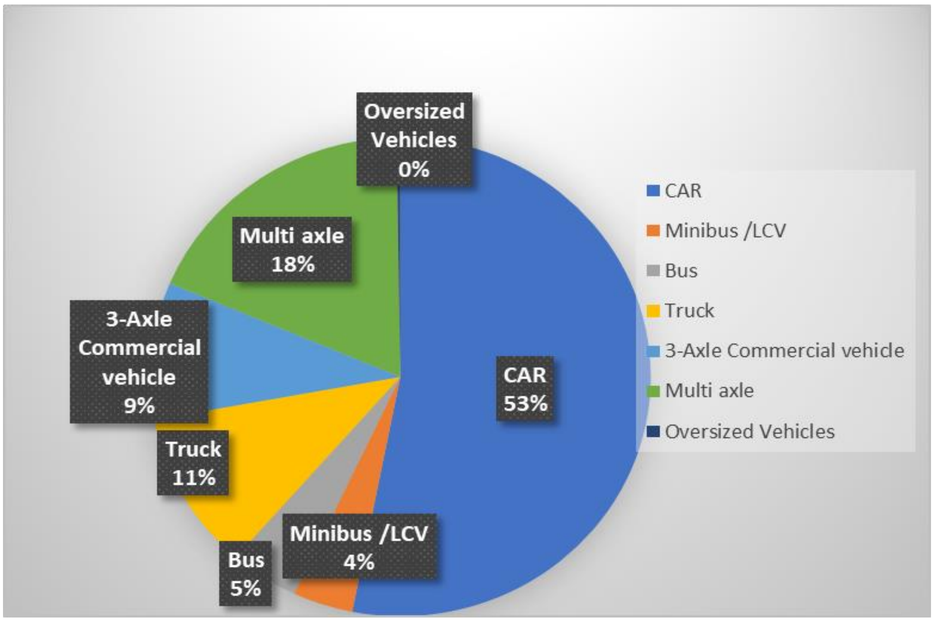

Figure 3-3: Model split of tollable vehicle @ Km 194.000

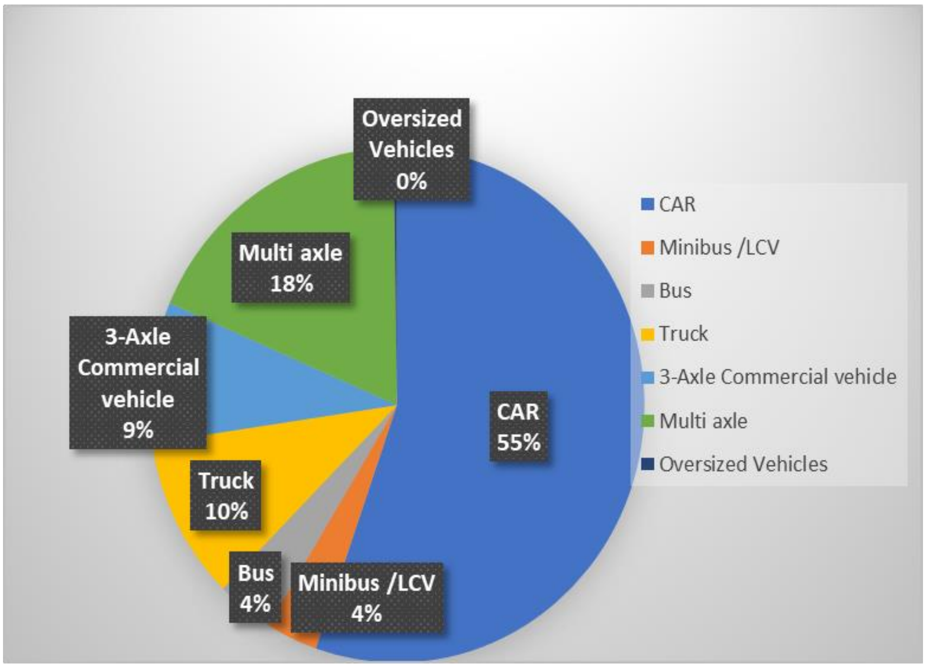

Figure 3-3: Model split of tollable vehicle @ Km 254.000

It is observed that car traffic forms about 42% of total traffic at toll plaza location KM 134.000 while multi axle commercial vehicles are about 38% of total traffic. Truck / Bus and LCV share about 16% and 4% of traffic volume respectively.

It is observed that car traffic forms about 53% of total traffic at toll plaza location KM 194.000 while multi axle commercial vehicles are about 27% of total traffic. Truck / Bus and LCV share about 16% and 4% of traffic volume respectively.

It is observed that car traffic forms about 55% of total traffic at toll plaza location KM 254.000 while multi axle commercial vehicles are about 27% of total traffic. Truck / Bus and LCV share about 14% and 4% of traffic volume respectively.

At second & third toll plaza passenger traffic component is higher due to urban settlement around.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2023-24

Table 3-8 : Journey Type Bifurcation of Traffic at Pargaon Toll Plaza KM 134.000

Sr. No	Type	Traffic Volume (Nos.)
		2023-24
1	Single Journey	6051
2	Return Journey	1989
3	Local Commercial Single Journey	36
4	Monthly Pass Local	9
5	Monthly Pass	0

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 75%. Return journey component is 25%. The number of monthly pass Local is 0% and Local Commercial single Journey 0% at Pargaon toll plaza.

The following tables give the details of journey distribution at Padalshingi toll plaza at Km 194.000 and Km 254.000.

Table 3-9 : Journey Type Bifurcation of Traffic at Padalshingi Toll Plaza KM 194.000

Sr. No	Type	Traffic Volume (Nos.)
		2023-24
1	Single Journey	7419
2	Return Journey	4481
3	Local Commercial Single Journey	363
4	Monthly Pass Local	92
5	Monthly Pass	1

Table 3-10 : Journey Type Bifurcation of Traffic at Maliwadi Toll Plaza KM 254.000

Sr. No	Type	Traffic Volume (Nos.)
		2023-24
1	Single Journey	6502
2	Return Journey	3903
3	Local Commercial Single Journey	33
4	Monthly Pass Local	39
5	Monthly Pass	7

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

In BOT projects there is always a risk factor of traffic shifting on competing roads after imposition of toll. Shifting of traffic depends on factors such as road length, type, geometry, riding quality and capacity. Competing road networks were identified around section and a speed delay analysis was conducted. In this detail of competing roads are provided and a comparison with project road is made. There can be some alternate route between Yedashi and Aurangabad. The following figure provides alignment of competing road network between Yedashi and Aurangabad.

Figure 4-1 : Alternate routes – Yedashi- Aurangabad

It can be observed that alternate routes are quite long and take more time to travel. Hence project road remains the most preferred option for travel between Yedashi and Aurangabad.

Similarly, at regional level there can be alternate via Ahmednagar for travel between Solapur and Aurangabad. The following figure shows competing networks in area.

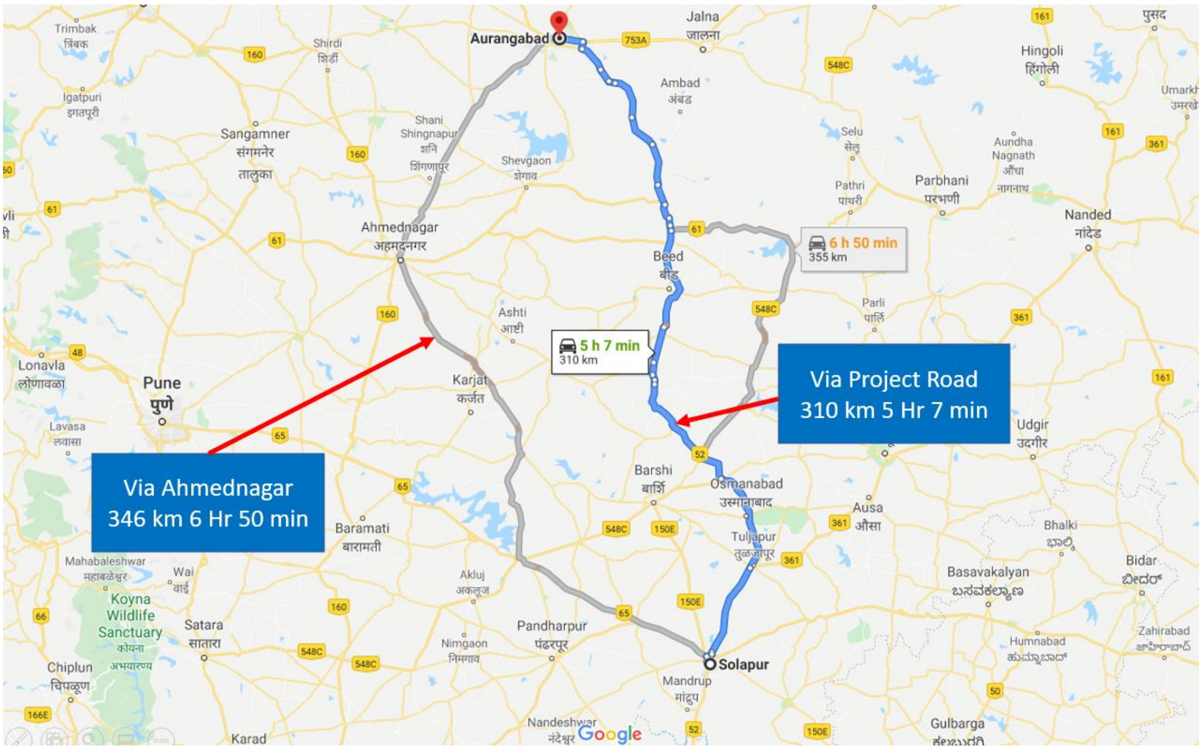

Figure 4-2 : Alternate route Between Solapur and Aurangabad

For travel between Solapur and Aurangabad as well project road is the most preferred option due to shorter length and less travel time. Completion of four laning of Solapur Yedashi section has complemented travel on this route.

The following table provides summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Solapur-Ahmednagar-Aurangabad	Alternate Route	346	50	6 Hr 50 Min	Project road has minimum travel time and shortest road
	Solapur- Yedashi-Aurangabad	Project Road	310	60	5 Hr 10 Min	
2	Yedashi- Kalam-Madalmoni-Aurangabad (SH-61)	Alternate Route	270	50	5 Hr 24 Min	Project road has minimum travel time and shortest road
	Yedashi-Ahmednagar-Aurangabad	Alternate Route	289	50	5 Hr 49 Min	
	Yedashi- Beed-Aurangabad	Project Road	223	57	3 Hr 54 Min	

It light of the above discussion project road remains most preferred route for the traffic of influence area. Moreover, project stretch is under toll operation for last one year. Hence any shifting of traffic, if any, would have settled by now and any further shifting of traffic is not envisaged from project road.

Regional Network

Project corridor is an important transportation link for the traffic between Karnataka and Rajasthan / Delhi and other northern states. Part of this traffic uses the Bijapur- Solapur- Ahmednagar- Shirdi route to join back at Dhule and proceed towards northern parts of country. The length of route between Bijapur via project road and route via Ahmednagar is almost equal. Thus, it is expected that some part traffic will come back on the project road as the four laning is complete. The following figures show the route between Bijapur and Dhule via Project Road and via Ahmednagar for better understanding.

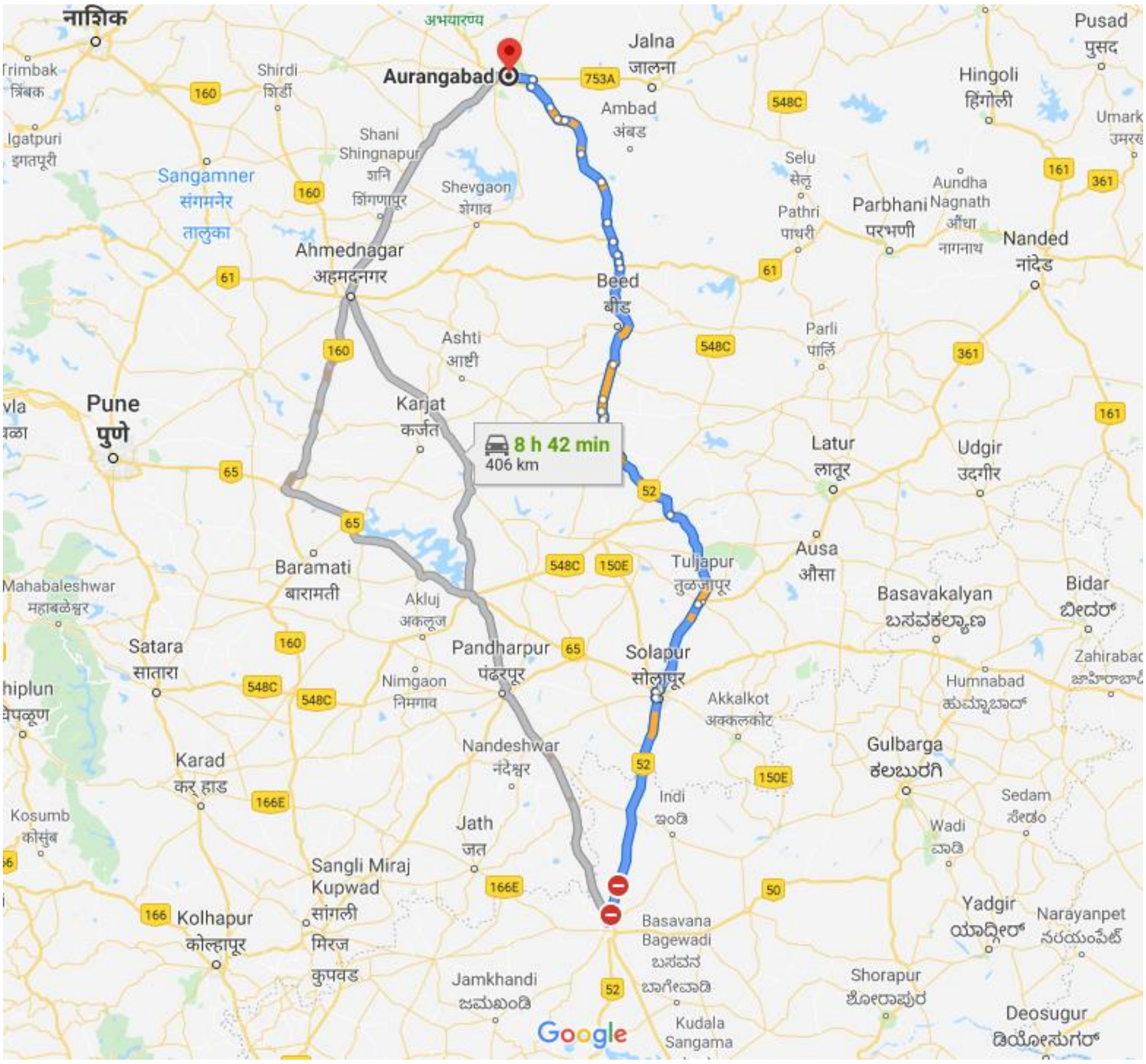

Figure 4-3 : Project Road in regional network.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Yedeshi - Aurangabad section of NH-8 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-12015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income

- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = k x Log (EI) + A

Where,

P = Number of Vehicles (Mode wise)

EI = Economic Indicator

A = Regression constant

k = Elasticity coefficient (Regression coefficient)

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Maharashtra. Toll plazas at Paragaon, Padalsingi and Bhokharwadi are in the state of Maharashtra. Project traffic share of many states like Karnataka, Gujarat & Haryana also. For elasticity calculations, working data from these states also has been analyzed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Maharashtra State.

Table 5-1 : Per Capita Income Vs Car Maharashtra

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	99564	2307841	5.00	6.36		
2013	103904	2592565	5.02	6.41	4%	
2014	109399	2834847	5.04	6.45	5%	
2015	114746	3113773	5.06	6.49	5%	
2016	122422	3406872	5.09	6.53	7%	
2017	132899	3715744	5.12	6.57	9%	5.96%

Regression analysis of same is given in figure below

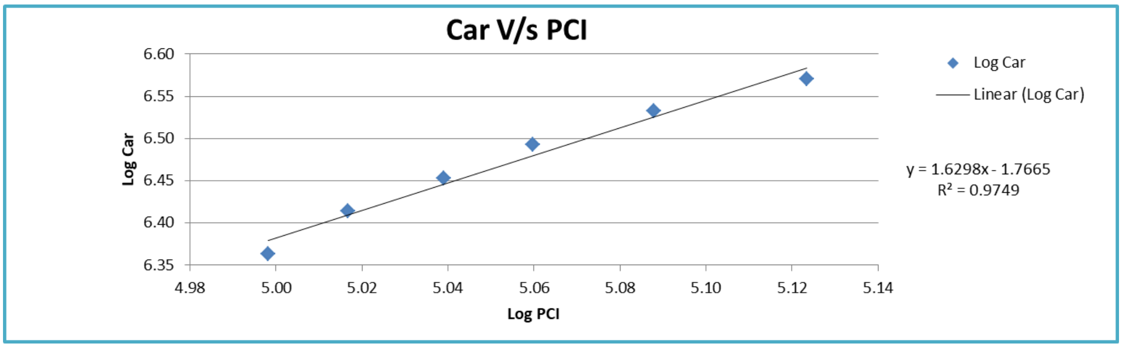

Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Maharashtra

Table 5-2 : Population Vs Bus Maharashtra

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	112374333	119298	8.05	5.08		
2013	113807248	129535	8.06	5.11	1%	
2014	115229410	140087	8.06	5.15	1%	
2015	116640546	140102	8.07	5.15	1%	
2016	118040394	150427	8.07	5.18	1%	
2017	119428710	160042	8.08	5.20	1%	1.23%

Regression analysis of same is given in figure below

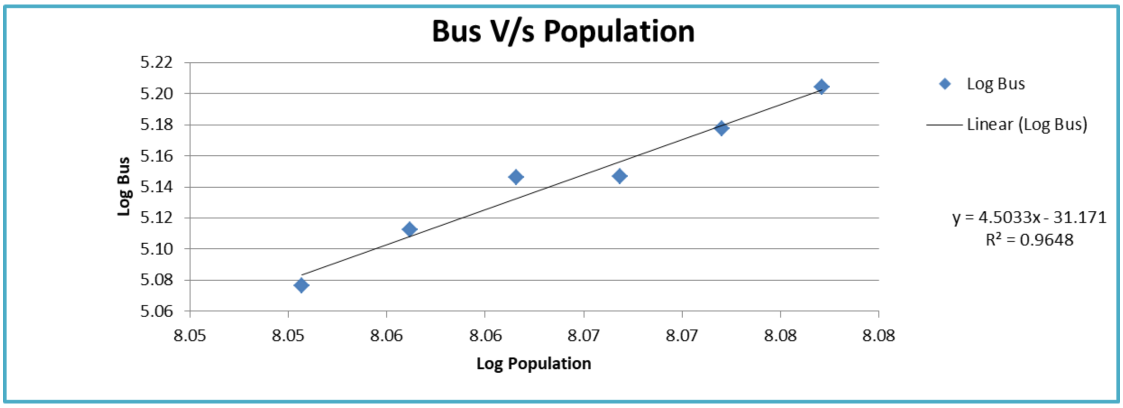

Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Maharashtra

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Maharashtra

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	1126595	656407	6.05	5.82		
2013	1189711	739725	6.08	5.87	6%	
2014	1267551	803128	6.10	5.90	7%	
2015	1345341	868632	6.13	5.94	6%	
2016	1452439	927903	6.16	5.97	8%	6.56%

Following figure depict regression analysis and extrapolation.

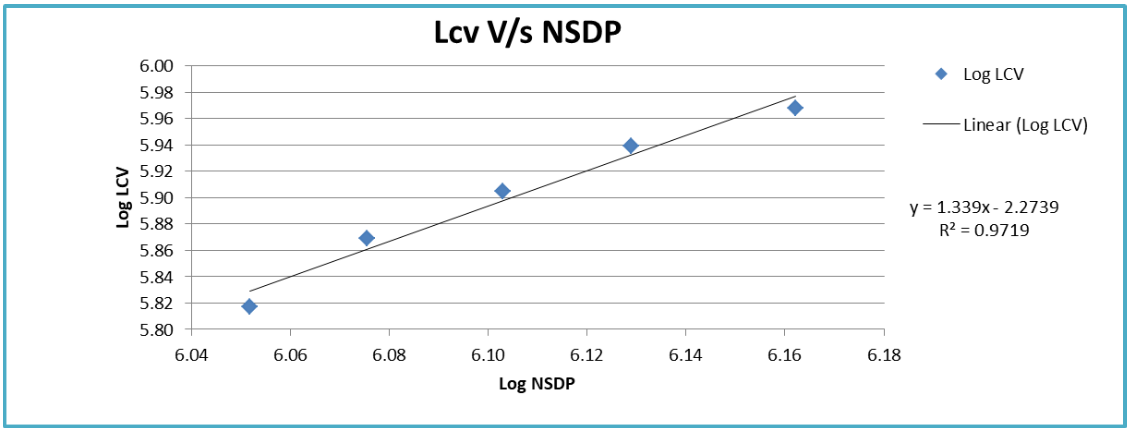

Table 5-4 : Truck Traffic Vs NSDP Maharashtra

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	1126595	411418	6.05	5.61		
2013	1189711	402366	6.08	5.60	6%	
2014	1267551	470128	6.10	5.67	7%	
2015	1345341	491582	6.13	5.69	6%	
2016	1452439	468810	6.16	5.67	8%	
2017	1595514	496439	6.20	5.70	10%	7.22%

Following figure depict regression analysis and extrapolation

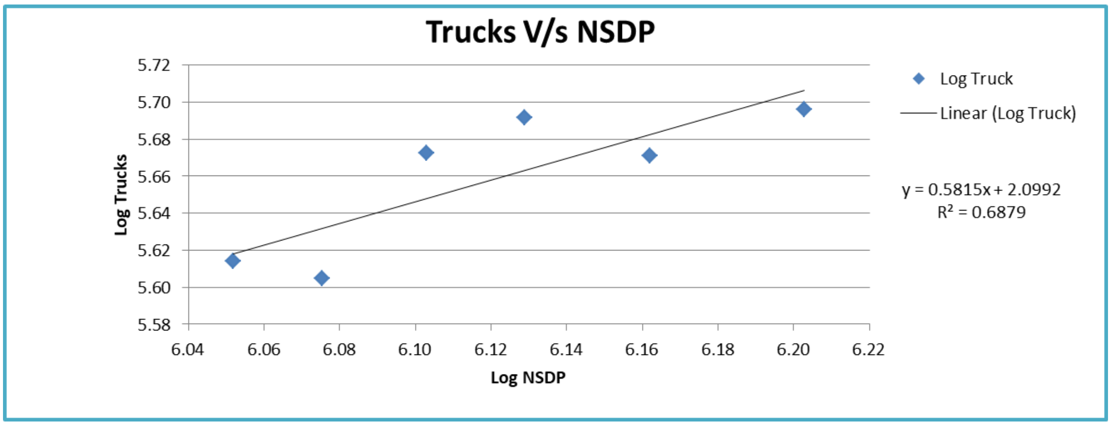

Figure 5-3 : Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Maharashtra.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-5 : Summary Regression Analysis Maharashtra

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Maharashtra	Car/Jeep	PCI	y = 1.6298x + -1.7665	R^2 = 0.9749	1.6298	5.96%	9.71%
	Bus	Population	y = 4.5033x - -31.1713	R^2 = 0.9648	4.5033	1.23%	5.52%
	LCV	NSDP	y = 1.339x - - 2.2739	R^2 = 0.9719	1.3390	6.56%	8.78%
	Truck	NSDP	y = 0.5815x - 2.0992	R^2 = 0.6879	0.5815	7.22%	4.20%

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Gujrat State.

Table 5-6 : Per Capita Income Vs Car Gujarat

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	87481	1411898	4.94	6.15		
2013	96683	1602129	4.99	6.20	11%	
2014	102589	1771298	5.01	6.25	6%	

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2015	111370	2008748	5.05	6.30	9%	
2016	120683	2260084	5.08	6.35	8%	
2017	129738	2527537	5.11	6.40	8%	8.21%

Regression analysis of same is given in figure below

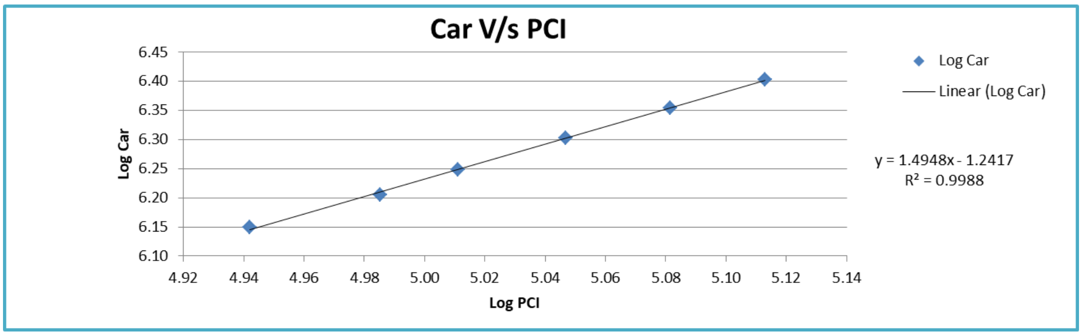

Figure 5-4 : Regression and Elasticity PCI vs. Car – Extrapolation Uttar Pradesh

Table 5-7 : Population Vs Bus Gujrat

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	60439692	67546	7.78	4.83		
2013	61563037	70615	7.79	4.85	2%	
2014	62684375	72998	7.80	4.86	2%	
2015	63803304	76435	7.80	4.88	2%	
2016	64919427	82734	7.81	4.92	2%	
2017	66032362	74855	7.82	4.87	2%	1.79%

Regression analysis of same is given in figure below

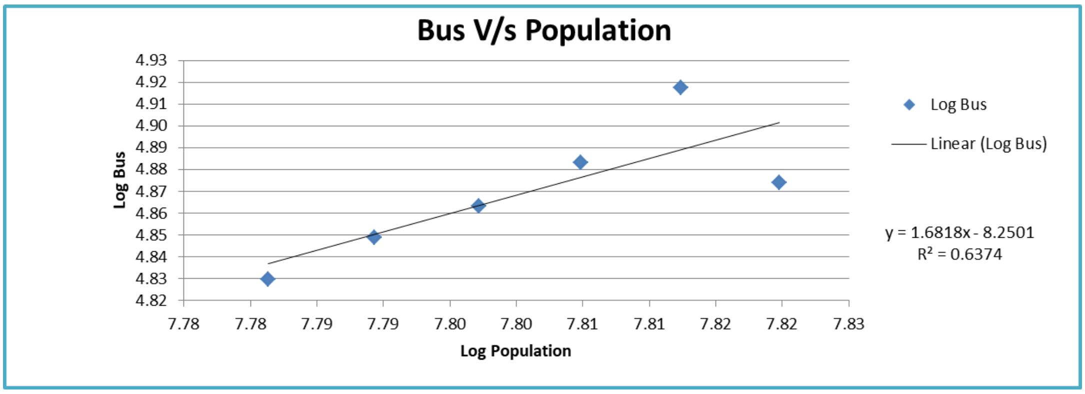

Figure 5-5 : Regression and Elasticity Population vs. Bus – Extrapolation Gujarat

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Gujarat

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	532809	448958	5.73	5.65		
2013	596659	499277	5.78	5.70	12%	
2014	641489	542918	5.81	5.73	8%	
2015	705629	589984	5.85	5.77	10%	
2016	774775	633599	5.89	5.80	10%	9.82%

Following figure depict regression analysis and extrapolation.

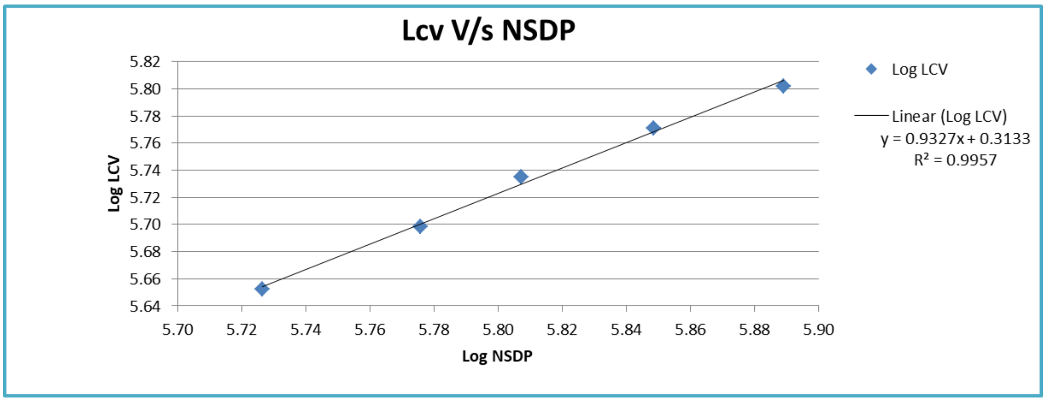

Table 5-9 : Truck Traffic Vs NSDP Gujarat

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	532809	301533	5.73	5.48		
2013	596659	319207	5.78	5.50	12%	
2014	641489	332185	5.81	5.52	8%	
2015	705629	352225	5.85	5.55	10%	
2016	774775	375265	5.89	5.57	10%	
2017	843930	396061	5.93	5.60	9%	9.64%

Following figure depict regression analysis and extrapolation

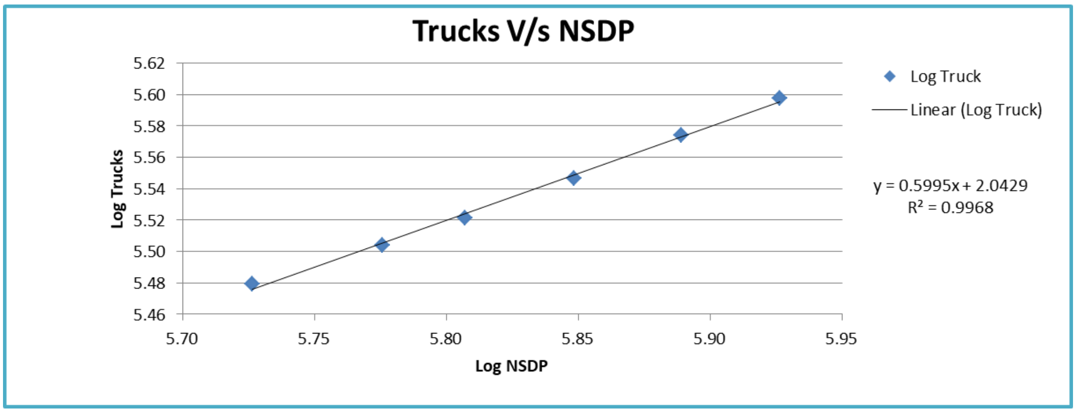

Figure 5-6 : Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Gujarat.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-10 : Summary Regression Analysis Gujrat

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Gujarat	Car/Jeep	PCI	y = 1.4948x + -1.2417	R^2 = 0.9988	1.4948	8.21%	12.27%
	Bus	Population	y = 1.6818x - -8.2501	R^2 = 0.6374	1.6818	1.79%	3.00%
	LCV	NSDP	y = 0.9327x - 0.3133	R^2 = 0.9957	0.9327	9.82%	9.16%
	Truck	NSDP	y = 0.5995x - 2.0429	R^2 = 0.9968	0.5995	9.64%	5.78%

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Haryana State.

Table 5-11 : Per Capita Income Vs Car Haryana

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	106085	1134514	5.03	6.05		
2013	111780	1293065	5.05	6.11	5%	
2014	119791	1454182	5.08	6.16	7%	
2015	125032	1609544	5.10	6.21	4%	
2016	137818	1764448	5.14	6.25	10%	
2017	150241	1879587	5.18	6.27	9%	7.23%

Regression analysis of same is given in figure below

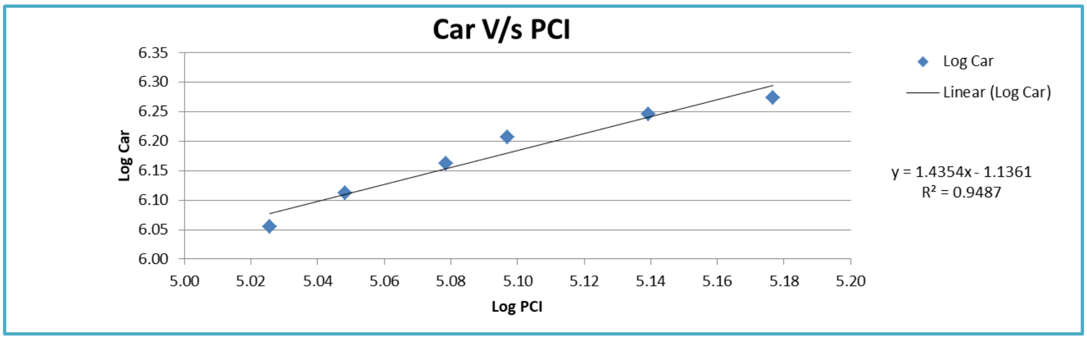

Figure 5-7 : Regression and Elasticity PCI vs. Car – Extrapolation Haryana

Table 5-12 : Population Vs Bus Haryana

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	25351462	39153	7.40	4.59		
2013	25751257	43456	7.41	4.64	2%	
2014	26149236	46558	7.42	4.67	2%	
2015	26545282	52640	7.42	4.72	2%	
2016	26939286	55781	7.43	4.75	1%	
2017	27331141	60129	7.44	4.78	1%	1.52%

Regression analysis of same is given in figure below

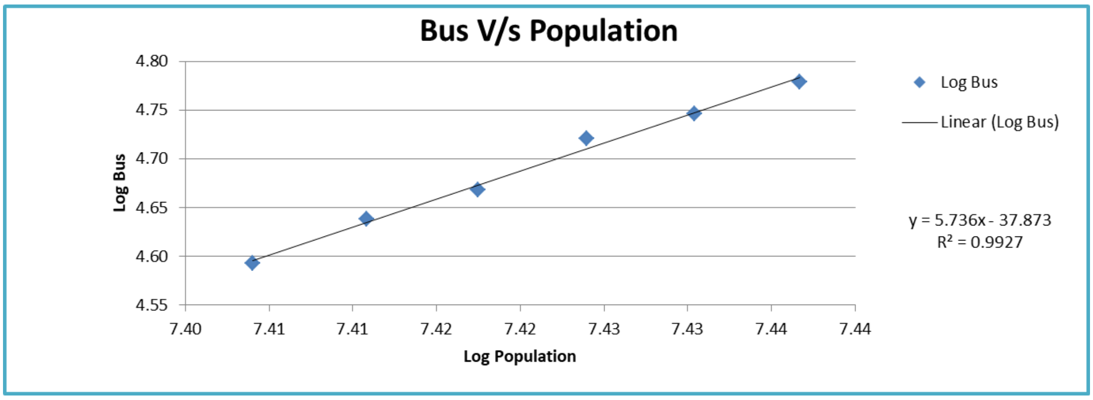

Figure 5-8 : Regression and Elasticity Population vs. Bus – Extrapolation Haryana

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-13 : LCV Traffic Vs NSDP Haryana

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	271152	124897	5.43	5.10		
2013	289756	137511	5.46	5.14	7%	
2014	314931	152069	5.50	5.18	9%	
2015	333359	167901	5.52	5.23	6%	

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2016	372659	182776	5.57	5.26	12%	8.30%

Following figure depict regression analysis and extrapolation.

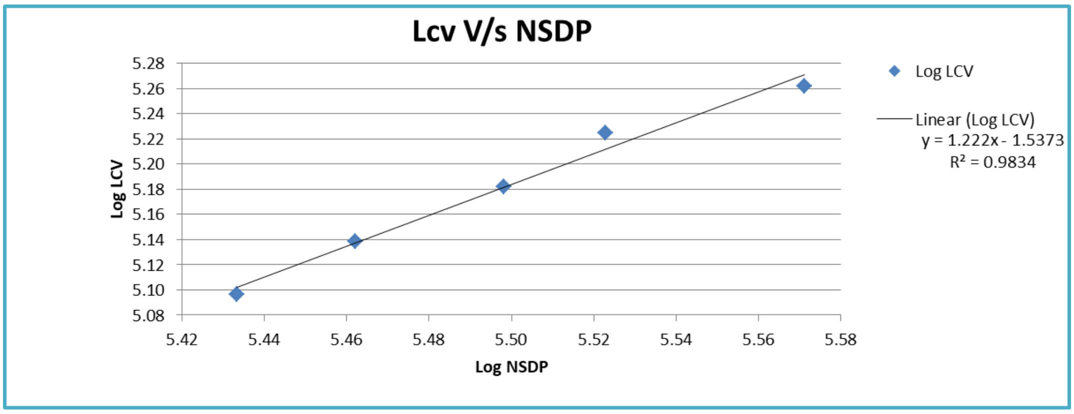

Figure 5-9 : Regression and Elasticity NSDP vs. Lcv – Extrapolation Haryana

Table 5-14 : Truck Traffic Vs NSDP Haryana

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	271152	292735	5.43	5.47		
2013	289756	307509	5.46	5.49	7%	
2014	314931	327882	5.50	5.52	9%	
2015	333359	348732	5.52	5.54	6%	
2016	372659	367730	5.57	5.57	12%	
2017	412006	390321	5.61	5.59	11%	8.75%

Following figure depict regression analysis and extrapolation

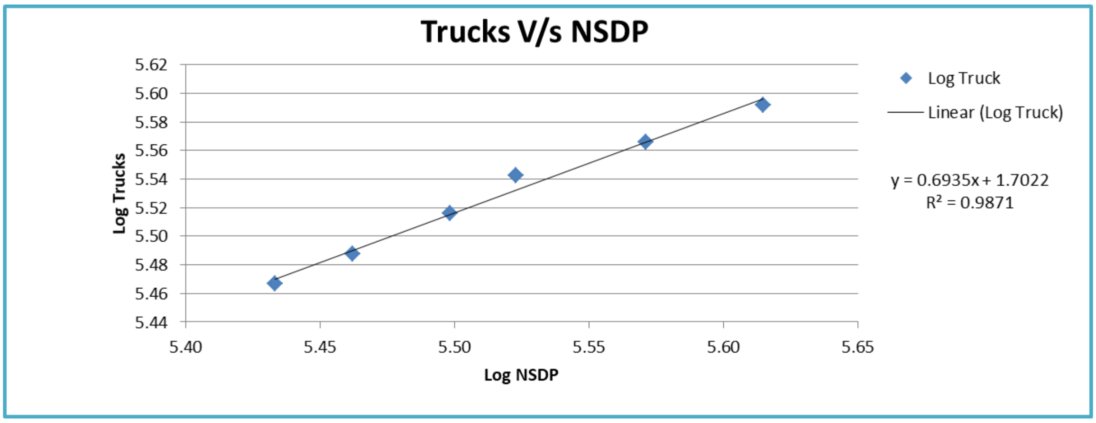

Figure 5-10 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Haryana.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-15 : Summary Regression Analysis Haryana

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Haryana	Car/Jeep	PCI	y = 1.4354x - -1.1361	R^2 = 0.9487	1.4354	7.23%	10.38%
	Bus	Population	y = 5.736x - -37.8732	R^2 = 0.9927	5.7360	1.52%	8.69%
	LCV	NSDP	y = 1.222x - -1.5373	R^2 = 0.9834	1.2220	8.30%	10.14%
	Truck	NSDP	y = 0.6935x - 1.7022	R^2 = 0.9871	0.6935	8.75%	6.07%

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Karnataka State.

Table 5-16 : Per Capita Income Vs Car Karnataka

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	90269	1454309	4.96	6.16		
2013	94382	1626924	4.97	6.21	5%	
2014	101864	1798035	5.01	6.25	8%	

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2015	105703	1992262	5.02	6.30	4%	
2016	116819	2207852	5.07	6.34	11%	
2017	131260	2203562	5.12	6.34	12%	7.83%

Regression analysis of same is given in figure below

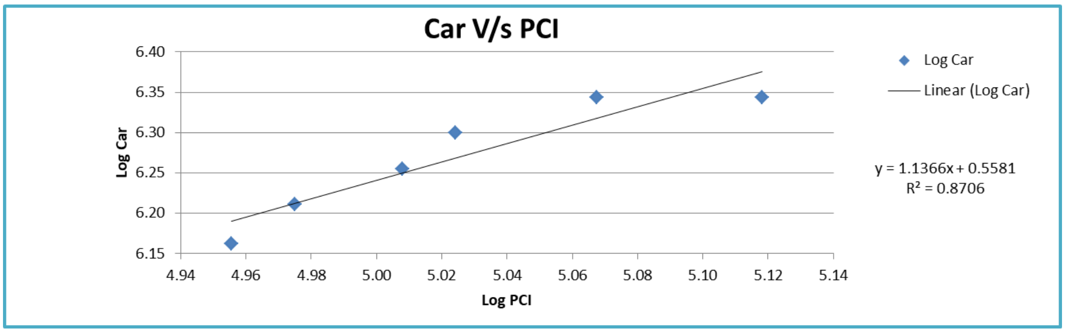

Figure 5-11 : Regression and Elasticity PCI vs. Car – Extrapolation Karnataka

Table 5-17 : Population Vs Bus Karnataka

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	61095297	175705	7.79	5.24		
2013	62058777	186705	7.79	5.27	2%	
2014	63017877	195913	7.80	5.29	2%	
2015	63972322	204803	7.81	5.31	2%	
2016	64921845	213699	7.81	5.33	1%	
2017	65866188	224580	7.82	5.35	1%	1.52%

Regression analysis of same is given in figure below

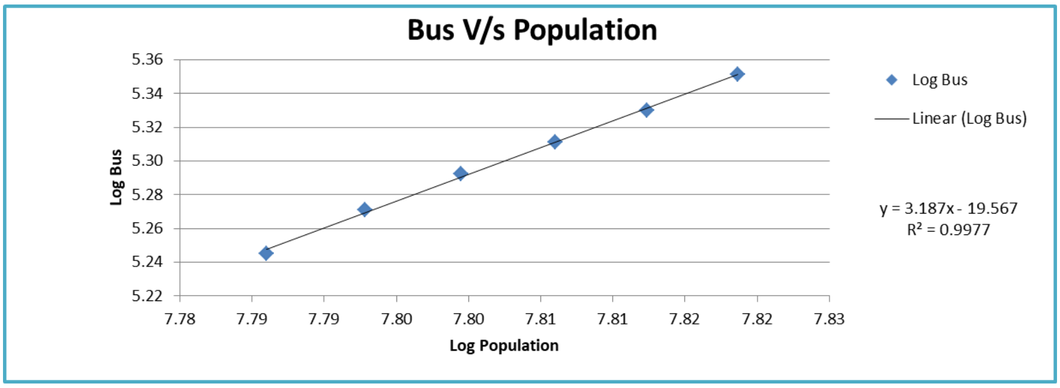

Figure 5-12 : Regression and Elasticity Population vs. Bus – Extrapolation Karnataka

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-18 : LCV Traffic Vs NSDP Karnataka

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	554990	221160	5.74	5.34		
2013	586592	258701	5.77	5.41	6%	
2014	639981	294266	5.81	5.47	9%	
2015	671322	331381	5.83	5.52	5%	
2016	749990	367572	5.88	5.57	12%	8%

Following figure depict regression analysis and extrapolation.

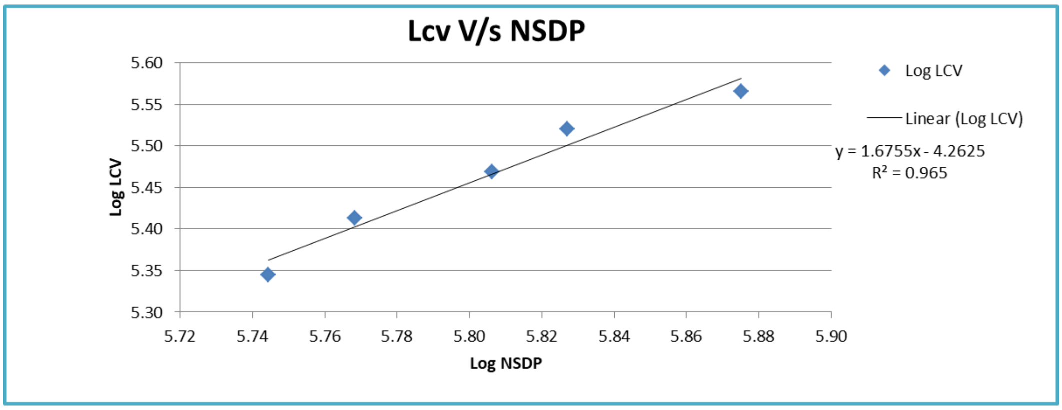

Figure 5-13 : Regression and Elasticity NSDP vs. Lcv – Extrapolation Karnataka

Table 5-19 : Truck Traffic Vs NSDP Karnataka

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	554990	233422	5.74	5.37		
2013	586592	247639	5.77	5.39	6%	
2014	639981	260989	5.81	5.42	9%	
2015	671322	274971	5.83	5.44	5%	
2016	749990	290415	5.88	5.46	12%	
2017	851880	306290	5.93	5.49	14%	9.00%

Following figure depict regression analysis and extrapolation

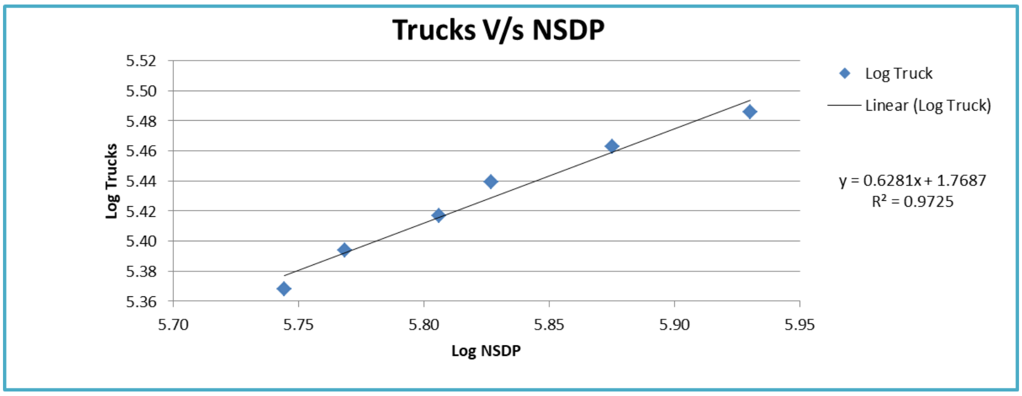

Figure 5-14 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Karnataka.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-20 : Summary Regression Analysis Karnataka

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Karnataka	Car/Jeep	PCI	y = 1.1366x - 0.5581	R^2 = 0.8706	1.1366	7.83%	8.90%
	Bus	Population	y = 3.187x - - 19.567	R^2 = 0.9977	3.1870	1.52%	4.83%
	LCV	NSDP	y = 1.6755x - -4.2625	R^2 = 0.965	1.6755	7.85%	13.16%
	Truck	NSDP	y = 0.6281x - 1.7687	R^2 = 0.9725	0.6281	9.00%	5.65%

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Yedashi to Aurangabad has recently been commissioned and is under tolling operation since March 2019. As traffic data available for last two years was affected due to COVID-19 the same cannot be taken as representative. A minimum of about 5 -6 years' consistent traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

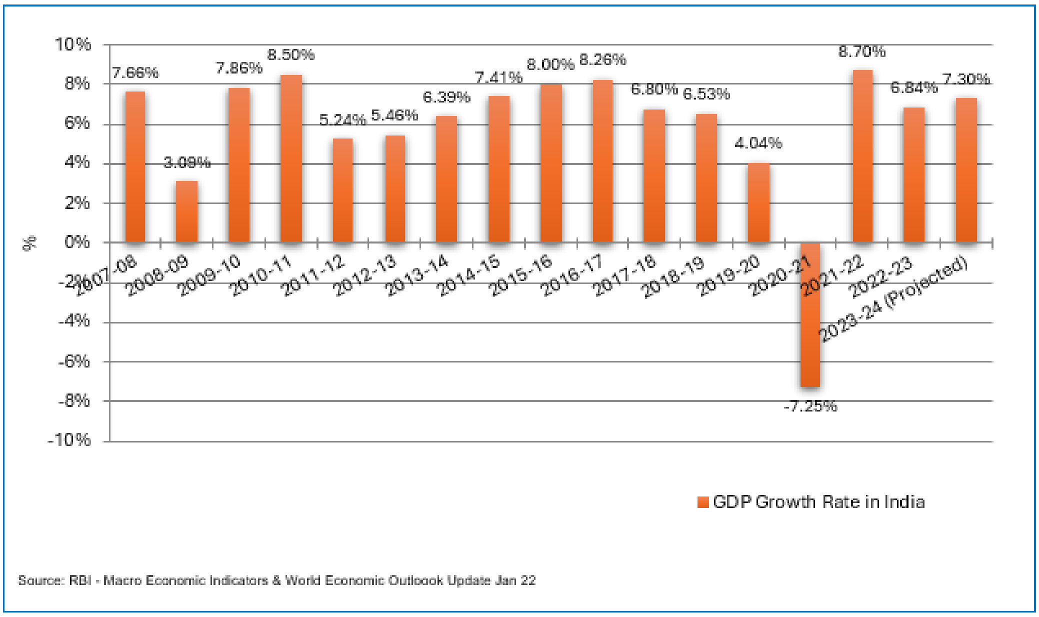

Figure 5-15 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. The World Economic Outlook update also has predicted a growth rate of about 7.5 % in the year 2022-23.

5.6 Developments along and around the Project Corridor & State

Aurangabad: is the fifth largest city in Maharashtra. It lies on a major trade route that used to connect north-west India's sea and land ports to the Deccan region. Aurangabad is administrative headquarters of the Aurangabad Division or Marathwada region.

Beed: Agriculture is the main business in Beed, and it is largely dependent on monsoon rain. Beed also is a district which provides a large number of laborers in India specially in the form of sugarcane cutters.

Jalna: is connected to major towns of the state-by-state highways. Road connectivity is excellent, roads connecting to Aurangabad, Pune, Ahmednagar, Nagpur, Beed, Mumbai having been upgraded to four-lane highways. A New Nagpur-Aurangabad-Mumbai highway, passing through Jalna, is being developed. There are various cotton-ginning & oil-pressing factories in Jalna.

Until 1960 Aurangabad was a undeveloped city and industrially backward area. After 1960 Growth began when the Maharashtra Industrial Development Corporation (MIDC) began acquiring land and setting up industrial estates. Aurangabad is a now classic example of efforts of a state government towards the balanced industrialisation of the state. Major Industrial areas of Aurangabad are Chikhalthana MIDC, Shendra MIDC and Waluj MIDC. Many of the large India and multinational firms have established themselves in Industrial areas of Shendra, Waluj, Paithan.

Some of the big names include Audi, Skoda, Videocon, Siemens, Bajaj, Forbes, Goodyear, Wockhardt, Johnson & Johnson, Kenstar which have set up their production houses in Industrial areas of Aurangabad.

DMIC

Delhi Mumbai Industrial Corridor (DMIC) which is passing close to PIA envisaged to influence the pattern of development and industrialization of the region. To tap the development potential of the proposed freight corridor, an area spanning 150 kilometers wide on both sides of the freight corridor has been identified as Influence Region and is proposed to be developed as Delhi-Mumbai Industrial Corridor (DMIC). One of the Nashik Sinnar Igatpuri Investment Region's identified early bird projects is an industrial area comprising of total 40 sq. km to be developed into two parts one of 8 sq. km in Shendra and other with an area of 32 sq. km at Bidkin some 24 km from Aurangabad on the Paithan road.

The Aurangabad Industrial City (AURIC) Bidkin Industrial Area (BIA) is strategically positioned and directly connected to the major state highways which are Paithan Road, NH-211 and SH-178 (Jalna Road). The nearest major city is Aurangabad which is served by NH-211, Major State Highway (MSH) 6 and MSH-8, and SH-16, SH-60 and SH-148.

Considering the scenario, it may be assumed that the traffic growth on the project highway would remain high and there are minimal risks in terms of growth.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth has been suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.25% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Maharashtra Part of Stretch

Table 5-21 : Recommended Growth Rates Optimistic

Category / Year	2024-2025	2025-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	9.46%	7.71%	7.08%	6.77%	6.72%
Bus	6.00%	4.79%	4.27%	4.01%	4.01%
Minibus	6.00%	4.79%	4.27%	4.01%	4.01%
LCV	5.98%	4.10%	3.41%	3.07%	3.00%
2- Axle	4.92%	3.69%	3.17%	2.91%	2.86%
3 - Axle	6.19%	4.75%	4.05%	3.71%	3.65%
4 to6 Axle	6.82%	4.75%	4.05%	3.71%	3.65%
7 and Above Axle	6.82%	4.75%	4.05%	3.71%	3.65%

Table 5-22 : Recommended Growth Rates Pessimistic

Category / Year	2024-2025	2025-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	8.96%	7.21%	6.58%	6.27%	6.22%
Bus	5.50%	4.29%	3.77%	3.51%	3.51%
Minibus	5.50%	4.29%	3.77%	3.51%	3.51%
LCV	5.48%	3.60%	2.91%	2.57%	2.50%
2- Axle	4.42%	3.19%	2.67%	2.41%	2.36%
3 - Axle	5.69%	4.25%	3.55%	3.21%	3.15%
4 to6 Axle	6.32%	4.25%	3.55%	3.21%	3.15%
7 and Above Axle	6.32%	4.25%	3.55%	3.21%	3.15%

Table 5-23 : Recommended Growth Rates Most Likely

Category / Year	2024-2025	2025-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	9.21%	7.46%	6.83%	6.52%	6.47%
Bus	5.75%	4.54%	4.02%	3.76%	3.76%
Minibus	5.75%	4.54%	4.02%	3.76%	3.76%
LCV	5.73%	3.85%	3.16%	2.82%	2.75%
2- Axle	4.67%	3.44%	2.92%	2.66%	2.61%
3 - Axle	5.94%	4.50%	3.80%	3.46%	3.40%
4 to6 Axle	6.57%	4.50%	3.80%	3.46%	3.40%
7 and Above Axle	6.57%	4.50%	3.80%	3.46%	3.40%

It is observed that a PIL was filed at Hon’ble Bombay High Court (Aurangabad bench) to augment the Autram Ghat section (between Chalisgaon and Aurangabad). The Hon’ble High Court has passed an interim order in August 2023. It directed NHAI to submit a plan for augmentation of the road and till then movement of commercial vehicles is restricted on that section of the road. The matter is sub judice.

This has affected the traffic on stretch. It is assumed that the matter is temporary and should be resolved soon, in the near future and would result in increased traffic in the project corridor. Hence additional growth has been considered in the year 2025-26 to cater for the above.

Traffic and revenue have been worked out on the basis of the above growths and some are presented in subsequent chapters of the report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Chainage 134.000 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3388	332	244	1078	924	2089	29	8084	20153
2024-25	3985	379	278	1217	1053	2399	32	9343	23137
2025-26	4293	394	291	1262	1103	2513	33	9889	24309
2026-27	4624	410	305	1308	1155	2633	34	10469	25545
2027-28	4980	426	319	1356	1210	2758	36	11085	26847
2028-29	5364	443	334	1406	1267	2889	38	11741	28221
2029-30	5777	461	350	1458	1327	3026	40	12439	29671
2030-31	6185	476	365	1504	1381	3149	42	13102	31009
2031-32	6622	492	380	1551	1437	3277	44	13803	32409
2032-33	7090	508	397	1600	1495	3410	46	14546	33880
2033-34	7591	525	414	1651	1555	3548	48	15332	35421
2034-35	8128	542	432	1703	1618	3691	50	16164	37035
2035-36	8678	558	449	1752	1677	3828	52	16994	38609
2036-37	9265	575	467	1803	1739	3970	54	17873	40263
2037-38	9891	592	485	1856	1804	4118	56	18802	41997
2038-39	10560	609	505	1910	1871	4271	58	19784	43812
2039-40	11275	628	525	1965	1940	4429	60	20822	45708

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2040-41	12032	647	546	2021	2011	4590	62	21909	47671
2041-42	12839	666	568	2078	2084	4757	64	23056	49723
2042-43	13702	686	591	2137	2160	4930	66	24272	51877

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Chainage 194.000 KM (Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	6558	483	547	1324	1145	2270	28	12357	26677
2024-25	7717	550	622	1493	1308	2608	32	14330	30690
2025-26	8313	573	652	1548	1371	2732	33	15222	32328
2026-27	8954	596	683	1605	1436	2863	34	16171	34057
2027-28	9643	621	715	1664	1504	3000	35	17182	35881
2028-29	10386	646	749	1725	1576	3143	36	18261	37811
2029-30	11187	672	785	1789	1651	3292	38	19414	39855
2030-31	11979	695	819	1846	1718	3426	39	20522	41763
2031-32	12827	719	854	1904	1787	3565	40	21696	43763
2032-33	13734	744	891	1964	1859	3710	41	22943	45872
2033-34	14706	769	929	2026	1935	3860	43	24268	48093
2034-35	15746	795	968	2090	2014	4017	45	25675	50434
2035-36	16811	820	1007	2150	2089	4166	47	27090	52738
2036-37	17948	845	1048	2213	2167	4321	49	28591	55165
2037-38	19163	871	1090	2277	2247	4482	51	30181	57710
2038-39	20461	897	1134	2343	2330	4648	53	31866	60382
2039-40	21845	925	1179	2411	2416	4820	55	33651	63188
2040-41	23312	953	1226	2479	2504	4995	57	35526	66103
2041-42	24877	981	1276	2550	2596	5178	59	37517	69181
2042-43	26549	1010	1327	2623	2691	5367	61	39628	72413

Table 6-3 : Total Tollable Traffic @ Toll Plaza 3- Chainage 254.000 KM (Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	5799	353	388	1075	928	1918	21	10484	22233
2024-25	6824	402	444	1212	1061	2201	24	12166	25585
2025-26	7351	418	466	1256	1112	2306	25	12934	26970
2026-27	7918	435	489	1303	1166	2415	26	13752	28429
2027-28	8528	452	512	1351	1222	2530	27	14622	29968
2028-29	9185	471	536	1401	1280	2650	28	15551	31594
2029-30	9892	490	561	1452	1341	2775	29	16540	33307
2030-31	10592	506	585	1498	1396	2887	30	17494	34915
2031-32	11342	523	610	1546	1453	3004	31	18509	36611
2032-33	12144	540	636	1595	1512	3125	32	19584	38390
2033-34	13003	559	664	1645	1574	3251	33	20729	40269
2034-35	13922	578	693	1697	1638	3383	34	21945	42250
2035-36	14864	595	721	1746	1699	3508	35	23168	44198
2036-37	15869	614	750	1797	1762	3638	36	24466	46250
2037-38	16943	633	780	1849	1827	3773	37	25842	48406
2038-39	18090	652	811	1902	1894	3913	38	27300	50669
2039-40	19314	672	844	1958	1965	4058	39	28850	53060
2040-41	20611	692	878	2014	2037	4206	40	30478	55543
2041-42	21996	712	913	2072	2111	4359	41	32204	58152
2042-43	23474	734	949	2131	2188	4518	42	34036	60899

Table 6-4 : Total Tollable Traffic @ Toll Plaza 1- Chainage 134.000 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3388	332	244	1078	924	2089	29	8084	20153
2024-25	3968	378	278	1210	1048	2388	32	9302	23033
2025-26	4256	392	289	1248	1093	2489	33	9800	24083
2026-27	4563	406	302	1288	1140	2594	34	10327	25188
2027-28	4892	420	315	1329	1188	2704	35	10883	26344
2028-29	5245	435	329	1371	1238	2819	36	11473	27559
2029-30	5622	450	343	1415	1290	2939	37	12096	28833
2030-31	5992	463	356	1452	1336	3043	38	12680	29983
2031-32	6386	477	370	1490	1384	3151	39	13297	31189
2032-33	6805	491	384	1530	1433	3262	40	13945	32442
2033-34	7252	505	398	1571	1484	3378	41	14629	33754
2034-35	7729	519	413	1613	1536	3498	42	15350	35124
2035-36	8214	532	427	1651	1585	3610	43	16062	36440
2036-37	8728	546	442	1691	1636	3726	44	16813	37819
2037-38	9275	560	457	1732	1688	3846	45	17603	39256
2038-39	9855	574	473	1774	1742	3970	46	18434	40755
2039-40	10472	589	490	1817	1798	4097	47	19310	42319
2040-41	11123	604	507	1860	1854	4226	48	20222	43925
2041-42	11814	619	525	1904	1912	4359	49	21182	45602

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2042-43	12548	634	543	1949	1972	4496	50	22192	47348

Table 6-5 : Total Tollable Traffic @ Toll Plaza 2- Chainage 194.000 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	6558	483	547	1324	1145	2270	28	12357	26677
2024-25	7682	547	620	1488	1301	2596	32	14266	30554
2025-26	8237	567	647	1536	1356	2707	33	15083	32035
2026-27	8831	588	675	1585	1414	2822	34	15949	33587
2027-28	9468	610	704	1636	1475	2942	35	16870	35225
2028-29	10150	632	734	1688	1538	3068	36	17846	36946
2029-30	10881	655	765	1742	1603	3199	37	18882	38756
2030-31	11598	674	793	1789	1660	3313	38	19865	40415
2031-32	12360	694	823	1837	1720	3431	39	20904	42156
2032-33	13173	714	854	1886	1782	3553	40	22002	43979
2033-34	14039	735	886	1936	1845	3680	41	23162	45887
2034-35	14963	757	920	1987	1910	3811	42	24390	47888
2035-36	15901	777	952	2035	1972	3933	43	25613	49836
2036-37	16898	797	986	2084	2035	4060	44	26904	51877
2037-38	17957	818	1021	2134	2100	4191	45	28266	54011
2038-39	19082	840	1056	2185	2167	4326	46	29702	56240
2039-40	20277	862	1093	2237	2236	4465	47	31217	58572
2040-41	21537	884	1131	2289	2306	4606	48	32801	60984
2041-42	22876	906	1170	2343	2379	4751	49	34474	63511
2042-43	24298	929	1211	2399	2454	4900	50	36241	66159

Table 6-6 : Total Tollable Traffic @ Toll Plaza 3- Chainage 254.000 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	5799	353	388	1075	928	1918	21	10484	22233
2024-25	6793	399	441	1206	1057	2192	24	12111	25470
2025-26	7284	413	460	1245	1102	2286	25	12815	26724
2026-27	7808	428	479	1285	1148	2383	26	13557	28027
2027-28	8370	444	499	1326	1196	2484	27	14346	29399
2028-29	8973	460	521	1368	1246	2590	28	15186	30849
2029-30	9619	476	544	1411	1299	2700	29	16078	32376
2030-31	10251	490	564	1449	1345	2796	30	16925	33777
2031-32	10925	504	586	1488	1392	2896	31	17822	35251
2032-33	11642	518	608	1528	1441	2999	32	18768	36790
2033-34	12408	533	631	1569	1491	3106	33	19771	38406
2034-35	13224	549	655	1611	1544	3216	34	20833	40103

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2035-36	14053	563	678	1650	1593	3319	35	21891	41754
2036-37	14933	577	702	1690	1643	3426	36	23007	43483
2037-38	15868	592	726	1731	1696	3536	37	24186	45294
2038-39	16861	607	751	1773	1750	3649	38	25429	47185
2039-40	17918	623	777	1815	1806	3766	39	26744	49169
2040-41	19032	639	805	1858	1862	3884	40	28120	51224
2041-42	20215	655	833	1901	1920	4006	41	29571	53371
2042-43	21472	671	862	1945	1980	4131	42	31103	55618

Traffic projections for Most Likely scenario is given as under

Table 6-7 : Total Tollable Traffic @ Toll Plaza 1- Chainage 134.000 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3388	332	244	1078	924	2089	29	8084	20153
2024-25	3976	378	278	1213	1050	2394	32	9321	23083
2025-26	4273	392	291	1255	1097	2501	33	9842	24193
2026-27	4591	407	304	1298	1146	2613	34	10393	25357
2027-28	4933	422	318	1343	1197	2731	35	10979	26587
2028-29	5301	438	332	1389	1251	2854	36	11601	27879
2029-30	5696	454	347	1436	1307	2982	38	12260	29237
2030-31	6084	468	361	1478	1357	3096	39	12883	30482
2031-32	6499	483	375	1521	1408	3214	40	13540	31779
2032-33	6942	498	390	1565	1461	3336	41	14233	33134
2033-34	7416	513	406	1610	1516	3463	42	14966	34554
2034-35	7922	529	423	1657	1573	3594	44	15742	36046
2035-36	8438	544	439	1701	1627	3718	45	16512	37489
2036-37	8987	559	456	1746	1683	3847	46	17324	38999
2037-38	9572	574	473	1792	1741	3980	48	18180	40577
2038-39	10195	590	491	1839	1801	4117	50	19083	42225
2039-40	10859	606	509	1887	1864	4259	52	20036	43948
2040-41	11561	622	529	1936	1928	4403	54	21033	45730
2041-42	12308	639	549	1986	1994	4553	56	22085	47594
2042-43	13104	656	570	2038	2062	4708	58	23196	49545

Table 6-8 : Total Tollable Traffic @ Toll Plaza 2- Chainage 194.000 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	6558	483	547	1324	1145	2270	28	12357	26677
2024-25	7698	547	622	1490	1304	2601	32	14294	30614
2025-26	8272	569	650	1541	1364	2718	33	15147	32170
2026-27	8889	591	679	1594	1426	2840	34	16053	33806
2027-28	9552	614	710	1649	1490	2969	35	17019	35538
2028-29	10264	637	742	1706	1557	3103	36	18045	37360
2029-30	11029	662	776	1764	1626	3243	37	19137	39280
2030-31	11781	683	807	1815	1688	3366	38	20178	41054
2031-32	12586	705	839	1868	1752	3495	39	21284	42924
2032-33	13445	727	873	1923	1818	3628	40	22454	44884
2033-34	14363	750	908	1979	1887	3766	41	23694	46942
2034-35	15344	773	945	2037	1959	3909	42	25009	49106
2035-36	16345	795	980	2092	2026	4045	43	26326	51228
2036-37	17410	817	1017	2148	2095	4185	44	27716	53446
2037-38	18544	840	1055	2205	2167	4330	45	29186	55773
2038-39	19751	863	1094	2263	2243	4480	46	30740	58213
2039-40	21038	888	1135	2323	2321	4636	47	32388	60781
2040-41	22398	913	1177	2383	2400	4794	48	34113	63437
2041-42	23847	938	1221	2445	2481	4957	49	35938	66222
2042-43	25390	964	1267	2509	2566	5125	51	37872	69154

Table 6-9 : Total Tollable Traffic @ Toll Plaza 3- Chainage 254.000 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	5799	353	388	1075	928	1918	21	10484	22233
2024-25	6809	400	441	1210	1059	2197	24	12138	25528
2025-26	7318	416	461	1251	1106	2296	25	12873	26841
2026-27	7865	432	482	1294	1155	2399	26	13653	28219
2027-28	8452	448	504	1338	1206	2507	27	14482	29671
2028-29	9082	465	527	1384	1260	2620	28	15366	31209
2029-30	9759	482	551	1432	1316	2738	29	16307	32831
2030-31	10425	497	573	1474	1365	2842	30	17206	34331
2031-32	11136	513	596	1517	1416	2950	31	18159	35907
2032-33	11897	529	620	1561	1470	3062	32	19171	37567
2033-34	12709	545	645	1606	1525	3178	33	20241	39304
2034-35	13577	562	671	1653	1582	3298	34	21377	41132
2035-36	14462	578	696	1697	1636	3412	35	22516	42928
2036-37	15404	594	722	1742	1692	3530	36	23720	44810
2037-38	16407	611	750	1789	1750	3652	37	24996	46791
2038-39	17476	628	778	1837	1811	3778	38	26346	48868
2039-40	18614	645	807	1886	1873	3909	39	27773	51046
2040-41	19818	662	837	1935	1936	4042	40	29270	53304
2041-42	21098	681	868	1985	2001	4179	41	30853	55672
2042-43	22463	700	901	2036	2068	4321	42	32531	58162

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Yedeshi – Aurangabad project, the Target Date and Target Traffic are defined as under:

Target Date - 1st October 2023

Target Traffic -24407 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. Probable extension of concession period is estimated according to article 29 of concession agreement which comes to about 4-5 years Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	24407	23661	-3%	5%	5%	26	1.2

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	24407	23682	-3%	4%	4%	26	1.2

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	24407	23642	-3%	5%	5%	26	1.2

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Surat- Dahisar section of NH-8 is based on the old toll policy. As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued at fee at 2/3rd rate for 50 single journey trips.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
   a) Local Car Jeep Van - Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza)

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A} - \text{WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

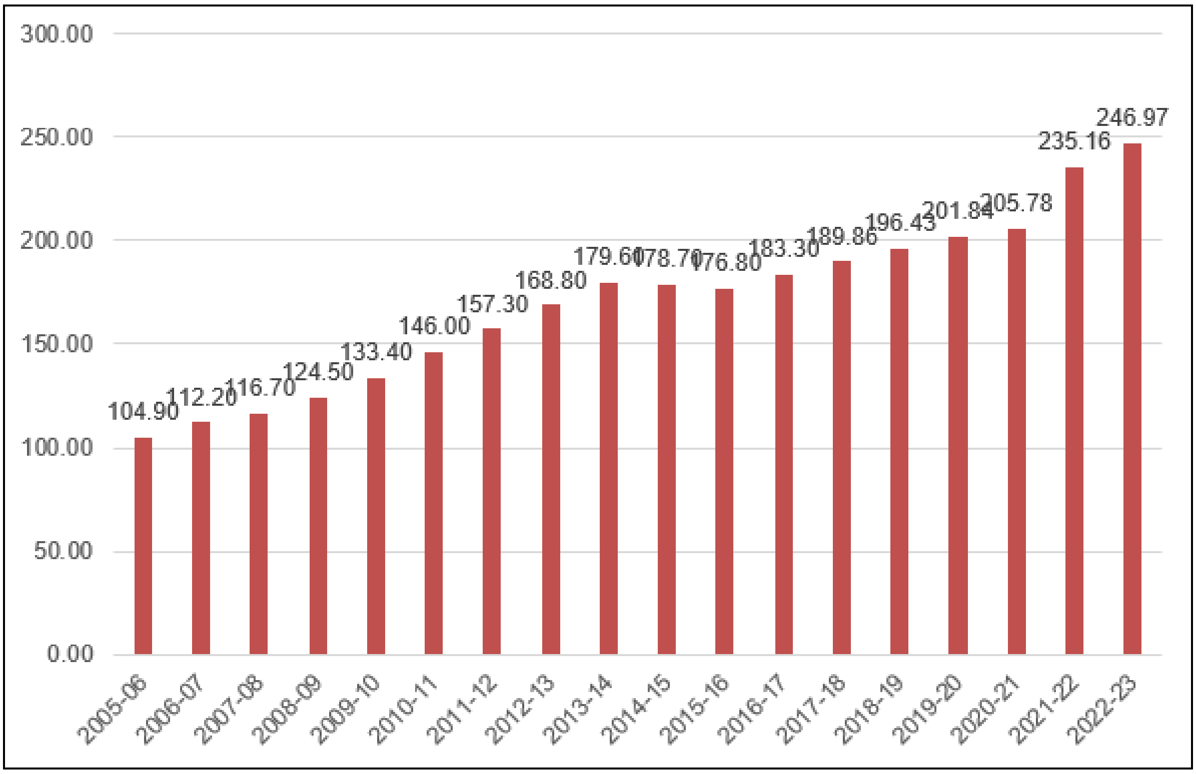

Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Oversized Vehicles (7 or more Axles)	4.20

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs. five) for the concession period and are given below. Since applicable length of highway length is equal for both plazas, applicable toll rates are also same

Thus, worked out rates for various categories of vehicle and discounts are given as under.

Table 7-2 : Toll Rates for Single Journey @ Km 134.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2023-24	80	125	265	265	285	415	505
2024-25	80	130	270	270	295	425	515
2024-25	80	130	270	270	295	425	515
2025-26	85	135	285	285	310	445	540
2026-27	90	140	300	300	325	465	570
2027-28	90	150	315	315	340	490	595
2028-29	95	155	330	330	360	515	630
2029-30	100	165	345	345	375	540	660
2030-31	105	175	365	365	395	570	695
2031-32	115	180	380	380	415	600	730
2032-33	120	190	400	400	440	630	765
2033-34	125	200	425	425	460	665	805
2034-35	130	210	445	445	485	700	850
2035-36	140	225	470	470	510	735	895
2036-37	145	235	495	495	540	775	940
2037-38	155	250	520	520	565	815	990
2038-39	160	260	545	545	595	860	1045
2039-40	170	275	575	575	630	905	1100
2040-41	180	290	605	605	660	950	1160
2041-42	190	305	640	640	700	1005	1220
2042-43	200	320	675	675	735	1060	1290

Table 7-3 : Toll Rates for Single Journey @ Km 194.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2023-24	110	175	365	365	395	570	695
2024-25	110	180	375	375	405	585	715
2024-25	110	180	375	375	405	585	715
2025-26	115	185	390	390	430	615	750
2026-27	120	195	410	410	450	645	785
2027-28	130	205	435	435	470	680	825
2028-29	135	215	455	455	495	715	870
2029-30	140	230	480	480	520	750	915

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2030-31	150	240	505	505	550	790	960
2031-32	155	250	530	530	575	830	1010
2032-33	165	265	555	555	605	870	1060
2033-34	175	280	585	585	640	915	1115
2034-35	180	295	615	615	670	965	1175
2035-36	190	310	650	650	705	1015	1235
2036-37	200	325	680	680	745	1070	1300
2037-38	210	345	720	720	785	1125	1370
2038-39	225	360	755	755	825	1185	1445
2039-40	235	380	795	795	870	1250	1520
2040-41	250	400	840	840	915	1315	1605
2041-42	260	420	885	885	965	1390	1690
2042-43	275	445	935	935	1020	1465	1780

Table 7-4 : Toll Rates for Single Journey @ Km 243.00

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2023-24	105	170	355	355	390	560	680
2024-25	110	175	365	365	400	570	695
2024-25	110	175	365	365	400	570	695
2025-26	115	185	385	385	420	600	730
2026-27	120	190	405	405	440	630	770
2027-28	125	200	425	425	460	665	810
2028-29	130	210	445	445	485	695	850
2029-30	140	225	465	465	510	735	890
2030-31	145	235	490	490	535	770	940
2031-32	155	245	515	515	565	810	985
2032-33	160	260	545	545	595	855	1040
2033-34	170	275	570	570	625	895	1090
2034-35	180	285	600	600	655	945	1150
2035-36	185	300	635	635	690	995	1210
2036-37	195	320	665	665	730	1045	1275
2037-38	210	335	700	700	765	1100	1340
2038-39	220	355	740	740	805	1160	1410
2039-40	230	370	780	780	850	1220	1490
2040-41	245	390	820	820	895	1290	1570
2041-42	255	415	865	865	945	1355	1650
2042-43	270	435	910	910	995	1430	1740

Table 7-5 : Toll Rates for Return Journey @ Km 134.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2023-24	115	190	395	395	430	620	755

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2024-25	120	195	405	405	440	635	775
2024-25	120	195	405	405	440	635	775
2025-26	125	205	425	425	465	665	810
2026-27	130	215	445	445	485	700	855
2027-28	140	225	470	470	510	735	895
2028-29	145	235	495	495	540	775	940
2029-30	155	245	520	520	565	815	990
2030-31	160	260	545	545	595	855	1040
2031-32	170	275	575	575	625	900	1095
2032-33	180	290	605	605	660	945	1150
2033-34	185	305	635	635	690	995	1210
2034-35	195	320	670	670	730	1045	1275
2035-36	210	335	705	705	765	1100	1340
2036-37	220	355	740	740	805	1160	1410
2037-38	230	370	780	780	850	1220	1485
2038-39	240	390	820	820	895	1285	1565
2039-40	255	415	865	865	945	1355	1650
2040-41	270	435	910	910	995	1430	1740
2041-42	285	460	960	960	1045	1505	1830
2042-43	300	485	1010	1010	1105	1585	1930

Table 7-6 : Toll Rates for Return journey @ Km 194.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2023-24	160	260	545	545	595	855	1045
2024-25	165	265	560	560	610	880	1070
2024-25	165	265	560	560	610	880	1070
2025-26	175	280	590	590	640	920	1125
2026-27	185	295	620	620	675	970	1180
2027-28	190	310	650	650	710	1020	1240
2028-29	200	325	680	680	745	1070	1300
2029-30	210	340	715	715	780	1125	1370
2030-31	225	360	755	755	825	1185	1440
2031-32	235	380	795	795	865	1245	1515
2032-33	245	400	835	835	910	1310	1590
2033-34	260	420	880	880	955	1375	1675
2034-35	275	440	925	925	1005	1450	1765
2035-36	285	465	970	970	1060	1525	1855
2036-37	300	490	1025	1025	1115	1605	1955
2037-38	320	515	1080	1080	1175	1690	2055
2038-39	335	540	1135	1135	1240	1780	2165
2039-40	355	570	1195	1195	1305	1875	2285
2040-41	370	600	1260	1260	1375	1975	2405
2041-42	390	635	1330	1330	1450	2080	2535
2042-43	415	670	1400	1400	1525	2195	2670

Table 7-7 : Toll Rates for Return journey @ Km 243.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2023-24	160	255	535	535	585	840	1020
2024-25	160	260	545	545	595	860	1045
2024-25	160	260	545	545	595	860	1045
2025-26	170	275	575	575	625	900	1100
2026-27	180	290	605	605	660	945	1155
2027-28	190	305	635	635	690	995	1210
2028-29	195	320	665	665	730	1045	1275
2029-30	205	335	700	700	765	1100	1340
2030-31	220	350	735	735	805	1155	1410
2031-32	230	370	775	775	845	1215	1480
2032-33	240	390	815	815	890	1280	1555
2033-34	255	410	860	860	935	1345	1640
2034-35	265	430	905	905	985	1415	1725
2035-36	280	455	950	950	1035	1490	1815
2036-37	295	480	1000	1000	1090	1570	1910
2037-38	310	505	1055	1055	1150	1650	2010
2038-39	330	530	1110	1110	1210	1740	2120
2039-40	345	560	1170	1170	1275	1835	2230
2040-41	365	590	1230	1230	1345	1930	2350
2041-42	385	620	1300	1300	1415	2035	2480
2042-43	405	655	1370	1370	1495	2145	2615

Table 7-8 : Toll Rates for Monthly Pass Local@ all Toll Plaza

Year	Car	Minibus /LCV
2023-24	330	330
2024-25	340	340
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760

Year	Car	Minibus /LCV
2041-42	800	800
2042-43	845	845

Table 7-9 : Toll Rates for Monthly Pass @ Km 134.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2023-24	2595	4190	8775	8775	9575	13765	16755
2024-25	2655	4295	8995	8995	9810	14105	17170
2024-25	2655	4295	8995	8995	9810	14105	17170
2025-26	2790	4510	9445	9445	10305	14815	18035
2026-27	2930	4735	9925	9925	10825	15565	18945
2027-28	3080	4975	10430	10430	11375	16355	19910
2028-29	3240	5230	10960	10960	11955	17190	20925
2029-30	3405	5500	11520	11520	12570	18070	21995
2030-31	3580	5780	12115	12115	13215	18995	23125
2031-32	3765	6080	12740	12740	13900	19980	24320
2032-33	3960	6395	13400	13400	14620	21015	25585
2033-34	4165	6730	14100	14100	15380	22110	26915
2034-35	4385	7080	14835	14835	16185	23265	28325
2035-36	4615	7455	15615	15615	17035	24490	29815
2036-37	4855	7845	16440	16440	17935	25780	31385
2037-38	5115	8265	17310	17310	18885	27150	33050
2038-39	5385	8705	18235	18235	19890	28595	34810
2039-40	5675	9170	19210	19210	20955	30120	36670
2040-41	5980	9660	20240	20240	22080	31740	38640
2041-42	6300	10180	21330	21330	23270	33450	40720
2042-43	6645	10730	22485	22485	24530	35260	42925

Table 7-10 : Toll Rates for Monthly Pass @ Km 194.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2023-24	3585	5795	12140	12140	13245	19040	23180
2024-25	3675	5940	12440	12440	13570	19510	23750
2024-25	3675	5940	12440	12440	13570	19510	23750
2025-26	3860	6235	13070	13070	14255	20495	24950
2026-27	4055	6550	13730	13730	14975	21530	26210
2027-28	4260	6885	14425	14425	15735	22620	27540
2028-29	4480	7235	15160	15160	16540	23775	28945
2029-30	4710	7605	15935	15935	17385	24995	30425
2030-31	4950	8000	16755	16755	18280	26280	31990
2031-32	5205	8410	17620	17620	19225	27635	33645
2032-33	5475	8845	18535	18535	20220	29070	35390
2033-34	5760	9310	19500	19500	21275	30585	37230
2034-35	6065	9795	20525	20525	22390	32185	39180
2035-36	6380	10310	21600	21600	23565	33875	41240

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2036-37	6720	10855	22740	22740	24810	35665	43415
2037-38	7075	11430	23950	23950	26125	37555	45720
2038-39	7450	12040	25220	25220	27515	39555	48150
2039-40	7850	12680	26570	26570	28985	41670	50725
2040-41	8270	13360	27995	27995	30540	43905	53450
2041-42	8720	14080	29505	29505	32190	46270	56330
2042-43	9190	14845	31100	31100	33930	48775	59375

Table 7-11 : Toll Rates for Monthly Pass @ Km 243.000

Year	Car	Minibus /LCV	Bus	Truck	3 -Axle	Multi axle	Oversized Vehicles
2023-24	3505	5665	11870	11870	12950	18615	22665
2024-25	3595	5805	12165	12165	13270	19075	23225
2024-25	3595	5805	12165	12165	13270	19075	23225
2025-26	3775	6100	12775	12775	13940	20035	24395
2026-27	3965	6405	13425	13425	14645	21050	25625
2027-28	4165	6730	14105	14105	15385	22120	26930
2028-29	4380	7075	14825	14825	16170	23245	28300
2029-30	4605	7435	15585	15585	17000	24435	29750
2030-31	4840	7820	16385	16385	17875	25695	31280
2031-32	5090	8225	17230	17230	18795	27020	32895
2032-33	5355	8650	18125	18125	19770	28420	34600
2033-34	5635	9100	19070	19070	20800	29905	36405
2034-35	5930	9575	20065	20065	21890	31470	38310
2035-36	6240	10080	21120	21120	23040	33120	40325
2036-37	6570	10615	22235	22235	24260	34870	42450
2037-38	6920	11175	23415	23415	25545	36720	44700
2038-39	7285	11770	24660	24660	26905	38675	47080
2039-40	7675	12400	25980	25980	28340	40740	49600
2040-41	8090	13065	27375	27375	29865	42930	52260
2041-42	8525	13770	28850	28850	31470	45240	55075
2042-43	8985	14515	30410	30410	33175	47690	58055

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2043-44 years starting from the year 2023-24 are shown in tables below.

Table 7-12 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP-2	TP-3	Total
2023-24	63.62	110.08	91.03	**264.73**
2024-25	71.93	124.73	102.97	**299.63**
2025-26	82.16	142.85	118.16	**343.16**
2026-27	90.36	157.66	130.56	**378.58**
2027-28	99.79	175.24	144.90	**419.92**
2028-29	109.83	192.95	158.86	**461.65**
2029-30	121.02	213.12	176.70	**510.84**
2030-31	133.10	235.80	194.23	**563.13**
2031-32	147.04	259.01	214.83	**620.87**
2032-33	161.10	283.90	235.73	**680.72**
2033-34	176.90	313.57	259.64	**750.11**
2034-35	194.12	344.72	286.16	**825.00**
2035-36	214.12	379.21	314.78	**908.11**
2036-37	233.95	415.73	345.04	**994.72**
2037-38	256.50	457.86	380.41	**1094.77**
2038-39	280.56	503.95	419.25	**1203.76**
2039-40	309.42	556.27	461.61	**1327.30**
2040-41	338.00	609.97	508.39	**1456.36**
2041-42	372.31	670.99	558.45	**1601.75**
2042-43	408.71	740.67	615.57	**1764.95**

Table 7-13 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP-2	TP-3	Total
2023-24	63.62	110.08	91.03	**264.73**
2024-25	71.60	124.17	102.51	**298.28**
2025-26	81.39	141.55	117.07	**340.01**
2026-27	89.09	155.51	128.71	**373.31**
2027-28	97.89	172.01	142.10	**412.00**
2028-29	107.21	188.49	155.00	**450.70**
2029-30	117.52	207.12	171.57	**496.21**
2030-31	128.61	228.10	187.67	**544.38**
2031-32	141.39	249.45	206.58	**597.41**
2032-33	154.11	272.10	225.55	**651.76**
2033-34	168.37	299.03	247.24	**714.64**
2034-35	183.86	327.10	271.13	**782.09**
2035-36	201.81	358.06	296.78	**856.66**
2036-37	219.42	390.65	323.71	**933.78**
2037-38	239.40	428.15	355.19	**1022.73**
2038-39	260.61	468.97	389.57	**1119.15**
2039-40	286.09	515.11	426.83	**1228.03**
2040-41	311.06	562.13	467.81	**1341.00**
2041-42	340.98	615.26	511.41	**1467.65**

Year	TP-1	TP-2	TP-3	Total
2042-43	372.45	675.94	560.98	**1609.38**

Table 7-14 : Toll Revenue Most Likely Scenario (Rs. Crores)

Year	TP-1	TP-2	TP-3	Total
2023-24	63.62	110.08	91.03	**264.73**
2024-25	71.76	124.43	102.74	**298.92**
2025-26	81.75	142.14	117.58	**341.47**
2026-27	89.70	156.50	129.61	**375.82**
2027-28	98.80	173.52	143.46	**415.77**
2028-29	108.46	190.54	156.85	**455.85**
2029-30	119.21	209.88	174.10	**503.20**
2030-31	130.76	231.66	190.88	**553.30**
2031-32	144.04	253.88	210.61	**608.54**
2032-33	157.35	277.54	230.51	**665.40**
2033-34	172.34	305.72	253.22	**731.28**
2034-35	188.73	335.22	278.42	**802.37**
2035-36	207.65	367.83	305.45	**880.92**
2036-37	226.31	402.23	333.94	**962.47**
2037-38	247.56	441.90	367.42	**1056.89**
2038-39	270.15	485.21	404.11	**1159.46**
2039-40	297.31	534.37	443.90	**1275.58**
2040-41	324.11	584.55	487.77	**1396.43**
2041-42	356.20	641.42	534.48	**1532.10**
2042-43	390.05	706.44	587.76	**1684.25**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Yedeshi to Aurangabad section of NH-211 in state of Maharashtra from km 100.000 to km 290.200 is currently four lane road. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the important regional network connecting Maharashtra with Karnataka and other southern states. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As discussed, dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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IRB INFRASTRUCTURE TRUST

PALSIT TO DANKUNI SECTION OF NH 19 IN THE STATE OF WEST BENGAL (KM 588.870 TO KM 652.700)

TTRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

MARCH 2024

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NAVI MUMBAI

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ABBREVIATIONS

AADT - Annual Average Daily Traffic

BOT - Build Operate Transfer

CAGR - Compound Annual Growth Rate

CTV - Classified traffic volume

DBFOT - Design, Build, Finance, Operate & Transfer

EME - Earth Moving Equipment

GDP - Gross Domestic Product

GSDP - Gross State Domestic Product

HCM - Heavy Construction Machinery

HCV - Heavy Commercial Vehicle

HTMS - Highway Traffic Management System

IRC - Indian Road Congress

IRR - Internal Rate of Return

LCV - Light Commercial Vehicle

LHS - Left Hand Side

LGV - Light Goods Vehicle

MAV - Multi Axle Vehicle

MORTH - Ministry of Road Transport and Highways

NH - National Highway

PCC - Plain Cement Concrete

CR - Coarse Rubble

NHAI - National Highway Authority of India

NHDP - National Highways Development Project

NSDP - Net State Domestic Product

O&M - Operation & Maintenance

PCDP - Per Capita Domestic Product

PCI - Per Capita Income

PCU - Passenger Car Unit

PSC - Pre-stressed Concrete

RCC - Reinforced cement concrete

RHS - Right Hand Side

SH - State Highway

TP - Toll Plaza

WPI - Wholesale Price Index

SIR - Special Investment Region

c. - Circa

ROB - Railway Over Bridge

MDR - Major District Road

ODR - Other District Road

CA - Concession Agreement

RMT - Running Meter

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, **Palsit** to **Dankuni** section of NH-19 from km 588.870 to km 652.700 is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s Palsit Dankuni Tollway. Ltd*. (Concessionaire) has been awarded the Project for a concession period of 17 years starting from 2nd April 2022. The Project has been commissioned and is currently under construction for six laning. Six laning of project is underway and expected to complete soon.

Project stretch from Palsit to Dankuni is part of new NH-19 Which was previously referred as Delhi -Kolkata. During renumbering of National Highway, Delhi to Agra route was numbered as NH-44 and Agra to Kolkata has been assigned as NH-19. From a transportation point of view, it is Delhi – Kolkata corridor.

New NH-19 connects industrial cities like Agra, Kanpur, Allahabad, Varanasi, Dhanbad, Durgapur, Bardhman and terminates at Dankuni near Kolkata. Close proximity to Kolkata and Howrah has given impetus to industrial development around project highway at various locations.

Old Delhi Road (GT Road) lies east of project highway from Palsit onwards. Project stretch is developed at new alignment between Palsit and Dankuni and is known as Durgapur Expressway. The following figure shows the alignment of project stretch.

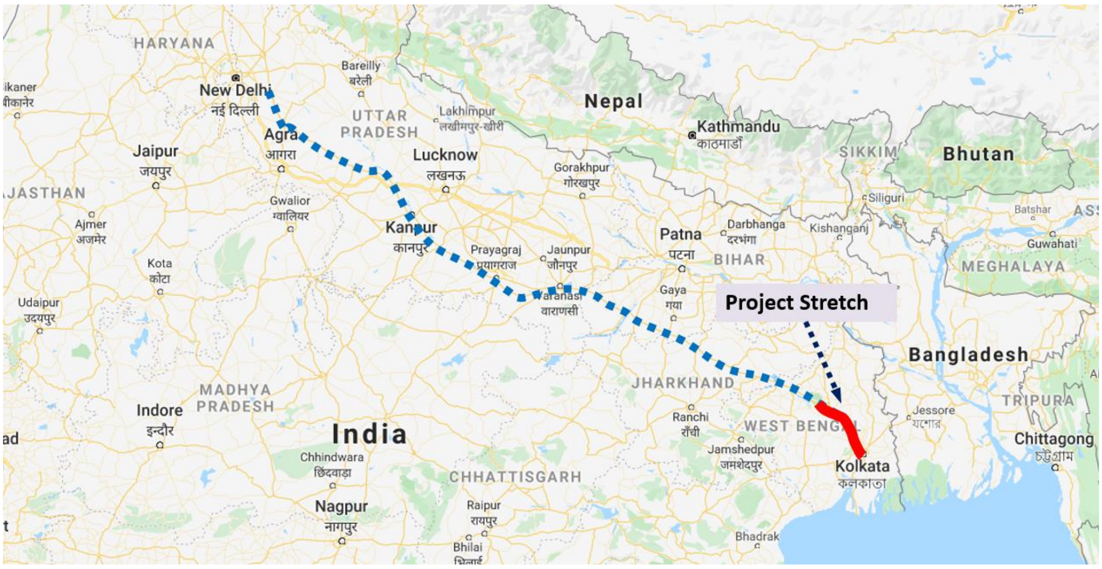

Figure 1-1: Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project stretch.

This report named as **"Traffic Study &*Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 2 (NH 2) which is now renumbered as NH-19 is oldest highway in India and connects state of Delhi, Haryana, Uttar Pradesh, Bihar, Jharkhand and West Bengal. It constitutes a major portion of the historical grand truck road.

It connects the national capital Delhi to Kolkata, as well as important cities Mathura, Agra, Kanpur, Allahabad, Varanasi, Dhanbad, Asansol, Durgapur and Bardhman. The highway is part of the Golden Quadrilateral project undertaken by National Highways Authority of India (NHAI).

The project road is the final link on Kolkata side between Palsit and Dankuni in the state of West Bengal. Dankuni is just out the outskirts of Kolkata on the northern side. The main project influence area of the project road consists of Dhanbad, Durgapur and Kolkata.

2.2 Project Stretch Description

Section of NH-19 from Palsit to Dankuni is part of the major transportation link in the area connecting industrial cities of Dhanbad, Asansol, Durgapur and Kolkata. Project stretch is basically and gateway link to Kolkata from northern India. Being just on the outskirts of the major metro city Kolkata, a large number of warehouses and logistic hubs are established on project road. This also contributes to sustainable traffic and growth on project highway.

There is one operative toll plaza at project stretch which is at Dankuni at km 646.005. The following figure shows project alignment and toll plaza location.

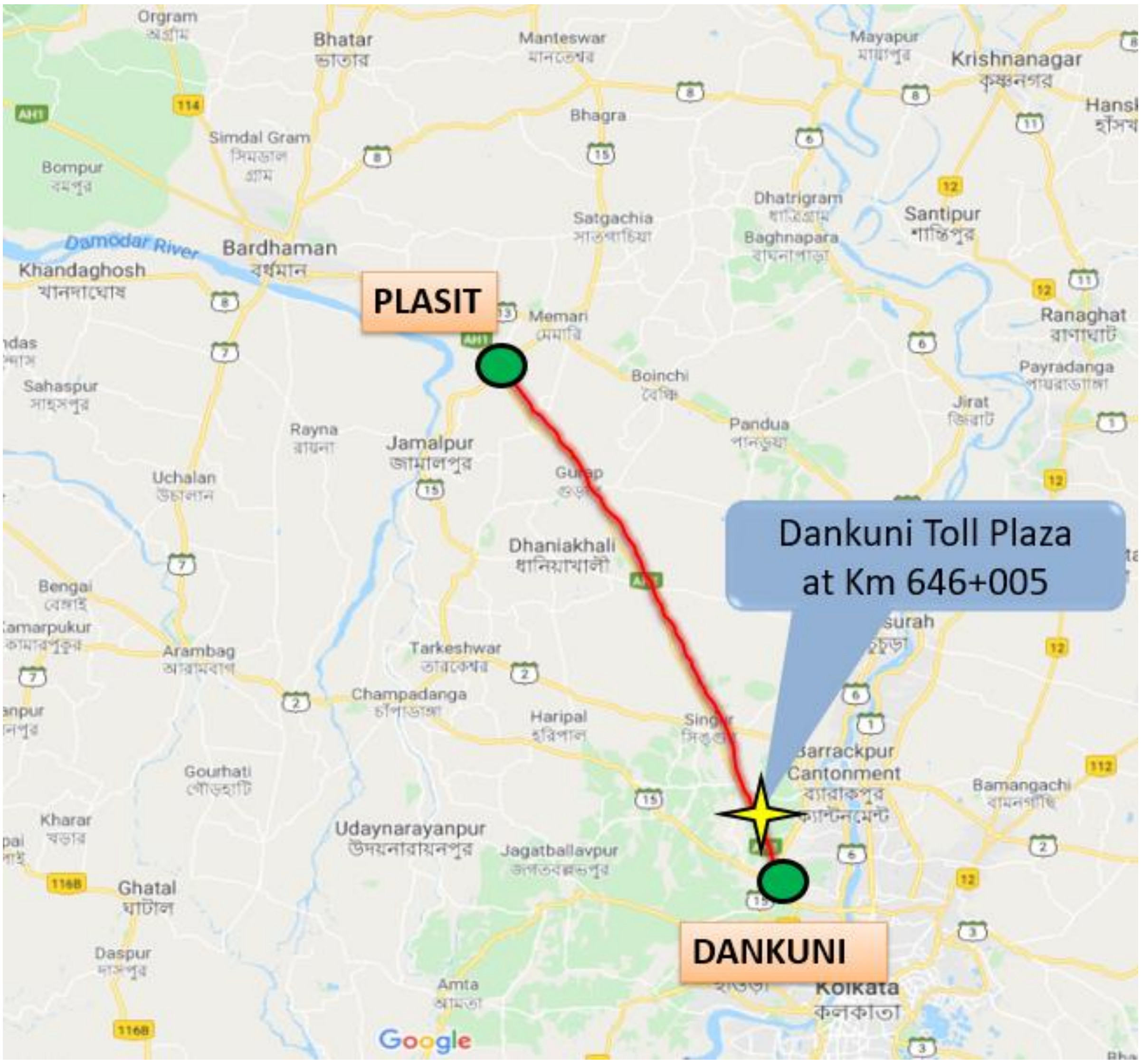

Figure 2-1: Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Four lane project is under operation. Six laning has commenced on corridor. The following photographs illustrate the project section along the corridor.

Figure 2-2: Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza location on Palsit - Dankuni section of NH-19 for Yr. 2022-23 & and traffic data from April 2023 to November 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Toll Plaza Dankuni at km 646.005	AADT for Yr. 2022-23 & Eight month from April 2023 to November 2023	AADT for Yr. 2022-23 & Eight month from April 2023 to November 2023	AADT for Yr. 2022-23 & Eight month from April 2023 to November 2023	AADT for Yr. 2022-23 & Eight month from April 2023 to November 2023	AADT for Yr. 2022-23 & Eight month from April 2023 to November 2023

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Bus
- Truck
- 3-Axle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for base Year 2022-23, and from April 2023 to November 2023. as under for toll plaza–

Since the traffic data available for this update is for only eight months, from April 2023 to November 2023, it may not represent the whole year traffic. Construction of stretch is nearing completion which will improve traffic on project. Hence a seasonality factor for balance part of year has been applied to average traffic of current eight months to arrive at Annual Average Daily Traffic of base year 2023-24. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and Annual Average Daily Traffic (AADT) for year 2023-24.

Table 3-3 : Traffic Data at Dankuni Toll Plaza at Km 646.005

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	10514	10935
2	LCV	1398	1031
3	Bus	789	788
4	Truck	3707	2542
5	3-Axle	3061	2018
6	Multi Axle	8974	8799
7	Oversize Vehicle	8	9
	Total	**28451**	**26121**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table*** 3-4**.**

Table 3-4 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-5 : Traffic in PCU at Project Stretch Base Year 2022-23

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2022-2023	Dankuni Km 646.005	28451	75699	2.66
2023-2024	Dankuni Km 646.005	26121	68159	2.61

It can be observed from above that project traffic has PCU index More than 2.5 at Dankuni which is an indicator of high proportion of commercial traffic in traffic mix.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

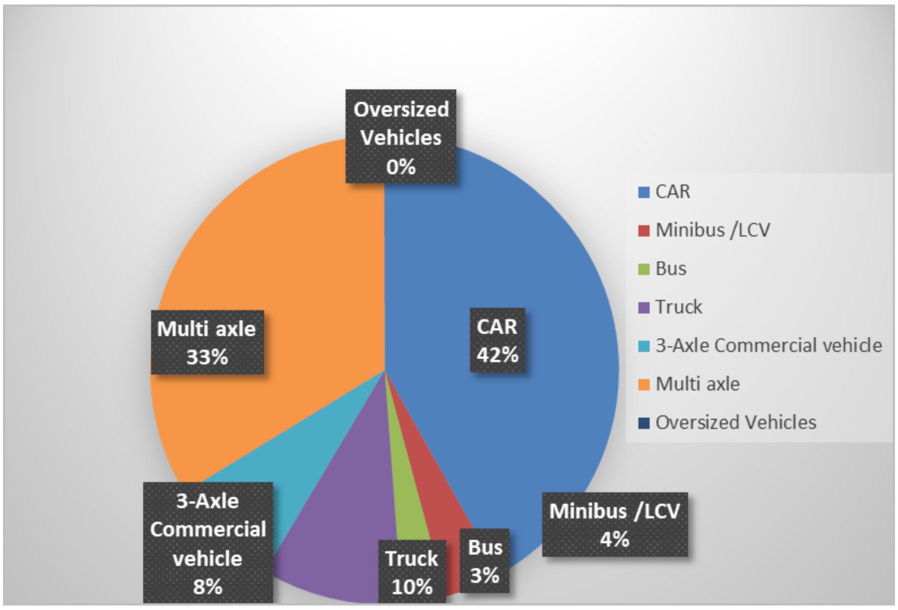

Figure 3-1 :Model Split of Tollable Vehicle-Dankuni Km 646.005

It is observed that car traffic forms about 42% of total traffic at Dankuni toll plaza location while multi axle commercial vehicles and trucks are about 58% of total traffic.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2023-24

Table 3-6 : Journey Type Bifurcation of Traffic at Dankuni Toll Plaza KM 646.005

Sr. No	Type	Traffic Volume (Nos.)
		2023-24
1	Single Journey	12664
2	Return Journey	13442
3	Local Commercial Single Journey	0
4	Monthly Pass Local	11
5	Monthly Pass	4

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 51%. Return journey component is 49%. The number of monthly passes is 0% at Dankuni toll plaza. This indicates a higher share of long traffic.

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch from Palsit to Dankuni is part of Golden Quadrilateral connecting four metros of India which has been widened to four lanes in year 2005. Part of the stretch, from Palsit to Dankuni, known as Durgapur Expressway, was constructed at different alignment to the east of old NH-2. Old NH-2, still known as GT road passes through congested built-up areas like Memari, Boinchi, Saptagram etc. It has a number of level rail crossings as well. Thus, traffic at project stretch is settled and as such has not much scope of diversion.
There are few alternate routes to project stretch. These are discussed in subsequent sections including their potential impact on project traffic.

Old NH-2 (GT Road)

Between Palsit and Dankuni old NH-2 is an available alternate route to project stretch (Durgapur Expressway). The following figure shows both Durgapur Expressway and GT road.

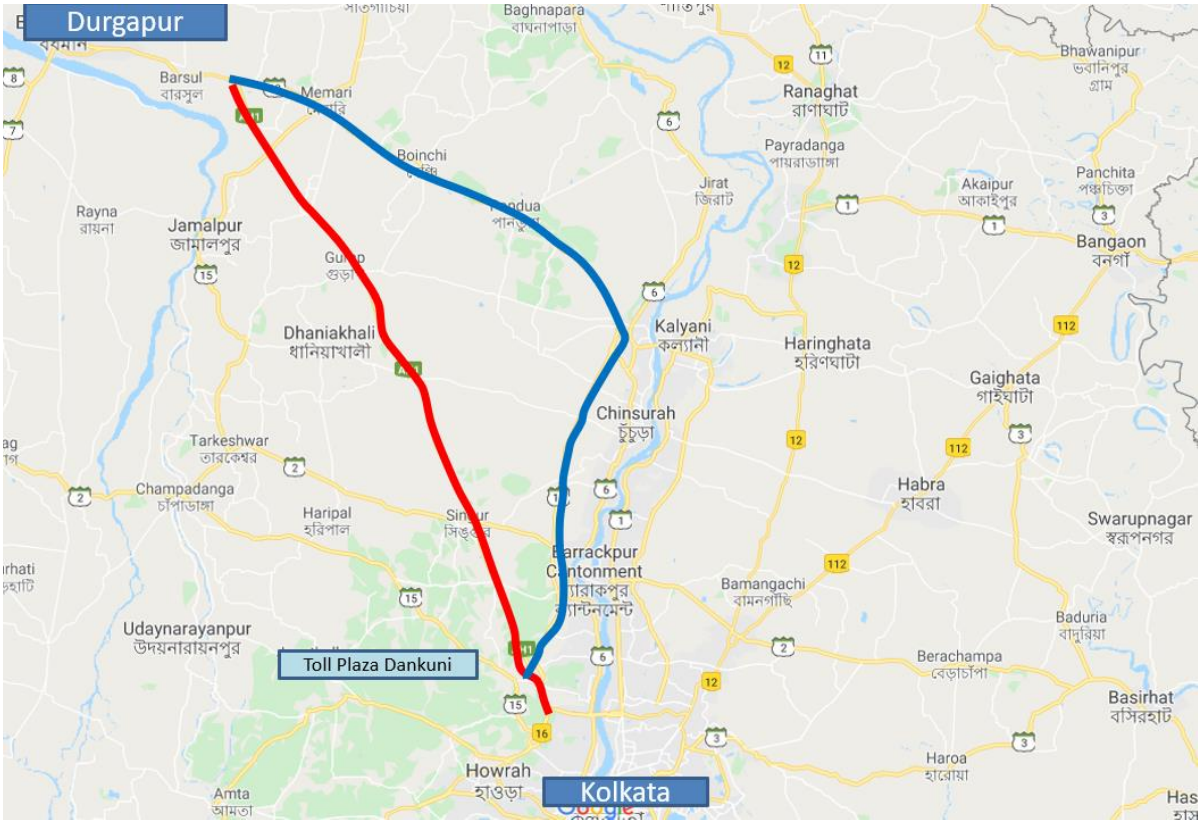

Figure 4-1 Project stretch and alternate GT Road

GT road passes through congested locations and is two lanes currently in most of the stretch.

The following figure shows the typical condition of GT road as compared to project stretch.

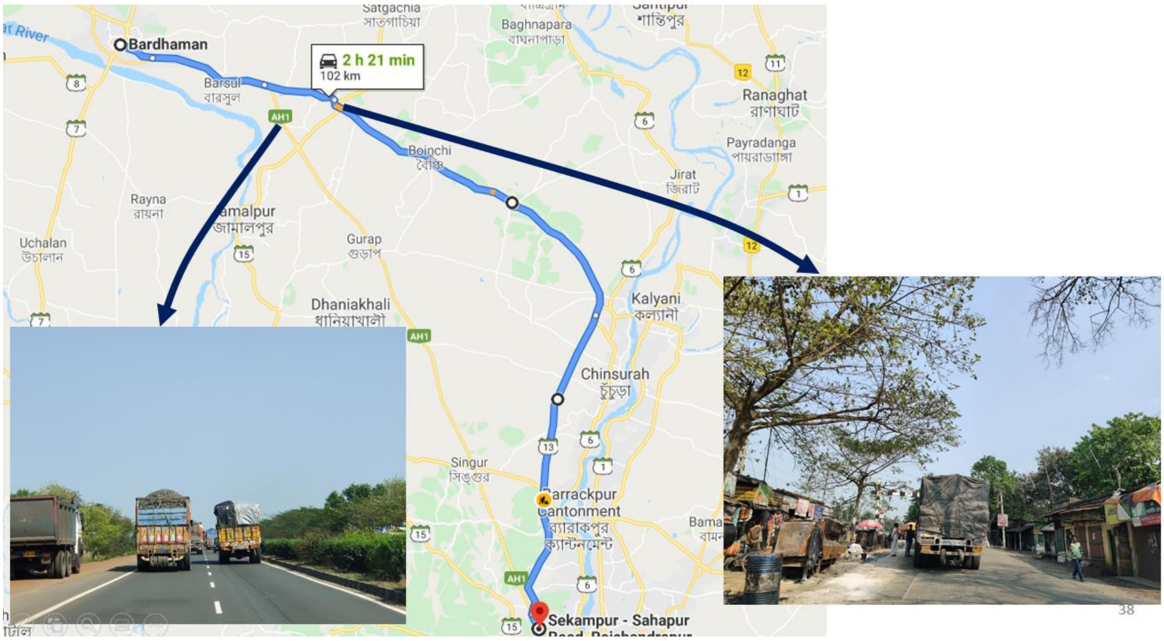

Figure 4-2 Project stretch and alternate GT Road Condition

There are as many as 5 level crossings on GT road which cause traffic congestion. The following figure shows one such typical crossing.

Figure 4-3 Railway level crossing at GT road.

The following table shows comparison of length and travel time via both project stretch and old GT road between Bardhman and Dankuni.

Table 4-1 Project Road and GT road comparison

Route	Distance (Km)	Time (Min)	Remarks
Bardhman -Kolkata Via Old NH-2 GT Road	102	141	Road is two lanes in most places and passes through congested built-up areas (Alikhoja, Memari, Boinchi, Saptagram) and 7 level crossings.
Bardhman -Kolkata Via Project Road	**84**	**79**	**Preferred Route**

Project road is quite short and saves lot of time. It such case any material shift of traffic from project stretch to old GT road is not envisaged.

B. Toll Plaza Local Leakage Roads

As such leakage roads are not there at toll plazas but there can be a longer detour to avoid toll plazas. The following figure shows the location and alignment of these roads at Dankuni Toll plaza.

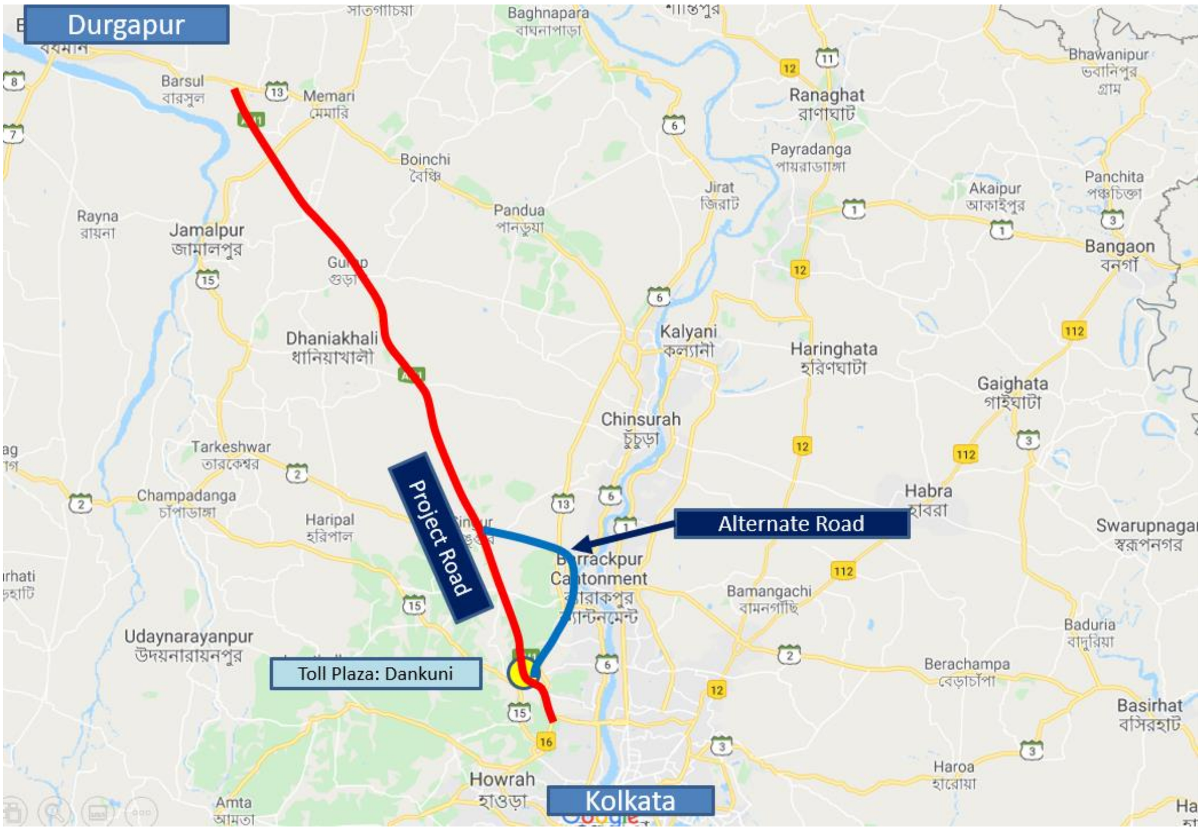

Figure 4-4 Local roads bypassing toll plaza.

At **Dankuni Toll Plaza,** there can be one alternate route via Singur- Baidyavati (Tarkeshwar) – Dankuni. The link from Singur to old Delhi Road is intermediate/ two lane. It's quite congested and geometrically very poor. Moreover, this road is used by pilgrims to reach the famous Tarkeshwar temple of Lord Shiva. Almost all through the year people walk in large groups on the way to Tarkeshwar. The major concentration of this Yatra is in the months of February to March and July- August. The following figure shows the typical condition of this link.

Old GT Road from Tarkeshwar to Dankuni is under widening to four lanes. There is one ROB under construction. Toll plaza is also under construction at GT Road. The following figures show under construction ROB and Toll Plaza at GT Road.

Figure 4-5 ROB & Toll Plaza under construction.

The following table provides comparison between project road and this alternate route around Dankuni toll plaza.

Table 4-2 Length time comparison of alternate route at Dankuni Toll

Route	Distance (Km)	Time (Min)	Remarks
Via Singur - Delhi Road (Old NH02)	27	41	From Singur to NH-2 road is intermediate lane and congested. Delhi road under four laning. Toll plaza under construction
Via Project Road (Dankuni)	**21.4**	**24**	**Preferred Route**

Between Singur and Kolkata- Road from Singur to Old NH-2 is two lane and quite congested. Currently part of NH-2 is under 4 laning and there is no toll as of now. Already passenger vehicles are using. Heavy commercial traffic is not allowed on existing bridge. Hence when ROB will be opened to traffic, certain amount of commercial traffic may divert to alternate route of Singur- NH-2.

Part of alternate route is congested and there is habitation on both sides. Progress on ROB at GT road has been very slow which is further impacted by pandemic COVI-19. As the route is existing since long and traffic is settled on both project stretch and GT road, it is unlikely that any further diversion of passenger traffic would take place. After completion of six laning of project stretch some passenger traffic may also divert to project stretch due to better traffic conditions at project stretch. However same is ignored for current analysis and projections.

At present heavy commercial traffic is not allowed on existing ROB on NH-2 however light commercial traffic is using the same. Hence some part of above diversion has already taken place.

Geometrics and condition of road from Singur to GT road is not good but still some amount of commercial traffic may divert to old GT road after ROB at GT road is competed. Following table shows potential diversion of traffic commercial traffic is taken into consideration for projection of traffic. Considering the above facts following diversion of commercial traffic has been assumed for traffic projections in 2025-26.

- Optimistic Case- 5%
- Most Likely Case- 10%
- Pessimistic Case- 15%

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Surat- Dahisar section of NH-8has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population

- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = k x Log (EI) + A

Where,

P = Number of Vehicles (Mode wise)

EI = Economic Indicator

A = Regression constant

k = Elasticity coefficient (Regression coefficient)

The elasticity for cars and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

As observed in OD analysis, the project stretch has a share of traffic from mainly three states of West Bengal, Jharkhand and Bihar and some traffic from Uttar Pradesh and Delhi. Hence regression of dependent variable and traffic has been done for these three states. The following tables and graphs present a summary of elasticity model of growth for project corridor.

Table 5-1 : Per Capita Income Vs. Car- West Bengal

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	31314	610218	4.50	5.79		
2012	32164	695463	4.51	5.84	3%	
2013	34177	791069	4.53	5.90	6%	
2014	36293	829478	4.56	5.92	6%	
2015	38624	916475	4.59	5.96	6%	5.40%

Regression analysis of above is given in following figure.

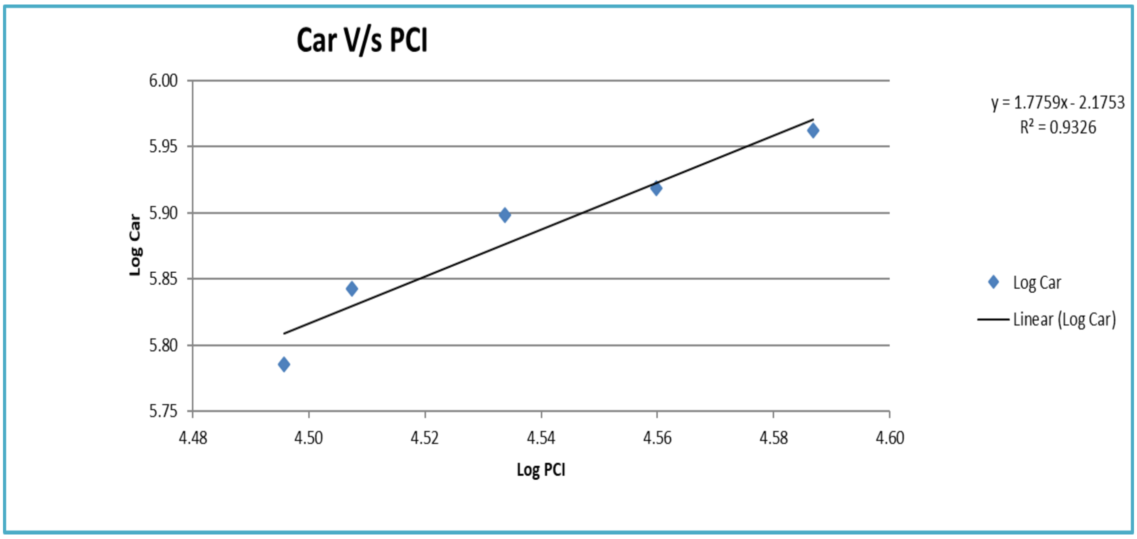

Figure 5-1 : Regression Analysis Car Vs. PCI West Bengal

Table 5-2 : NSDP Vs. Truck- West Bengal

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	27919100	285733	7.45	5.46		
2012	28943200	318573	7.46	5.50	4%	
2013	31033800	344816	7.49	5.54	7%	
2014	33242500	350565	7.52	5.54	7%	
2015	35684500	377636	7.55	5.58	7%	6.34%

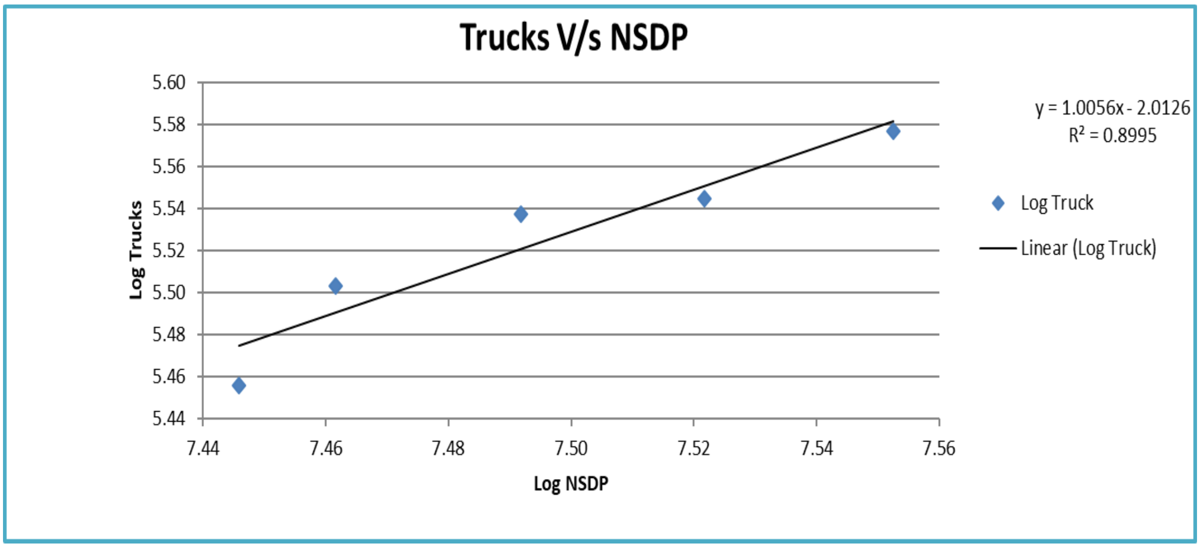

Figure 5-2 : Regression Analysis NSDP Vs. Truck West Bengal

Summary of regression analysis for elasticity and growth estimation for West Bengal are given in following table.

Table 5-3 : Summary Regression Analysis- West Bengal

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
West Bengal	Car/Jeep	PCI	y = 1.7759x - -2.1753	R^2 = 0.9326	1.7759	5.40%	9.58%	Good Regression
	Bus	Population	y = 0.5092x - 0.5636	R^2 = 0.0364	0.5092	0.89%	0.46%	Poor Regression
	Truck	NSDP	y = 1.0056x - -2.0126	R^2 = 0.8995	1.0056	6.34%	6.37%	Good Regression

Similarly, regression tables and graphs of economic model for Jharkhand are given as below.

Table 5-4 : Per Capita Income Vs. Car- Jharkhand

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	24330	317931	4.39	5.50		
2012	25265	360662	4.40	5.56	4%	
2013	27010	408016	4.43	5.61	7%	
2014	28882	461587	4.46	5.66	7%	
2015	30950	522192	4.49	5.72	7%	6.2%

Regression analysis of above is given in following figure.

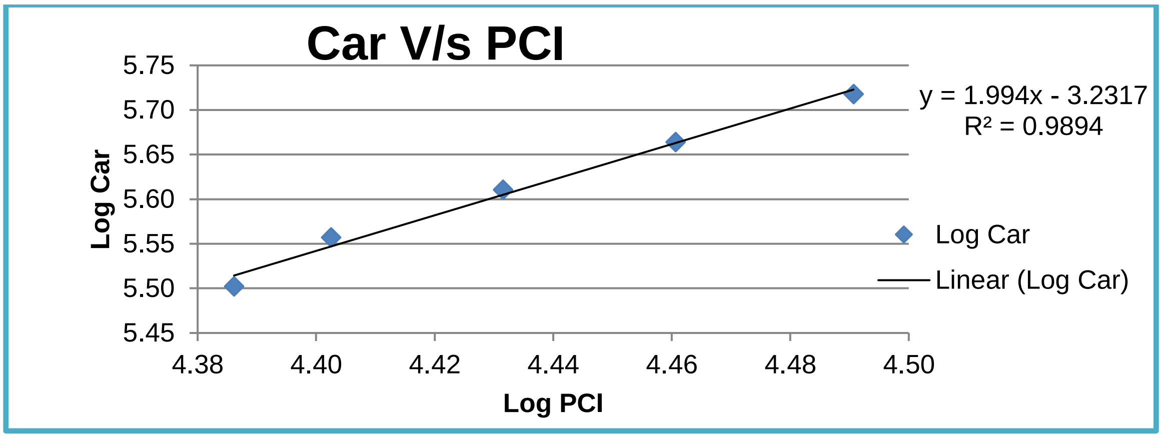

Figure 5-3 : Regression Analysis Car Vs. PCI Jharkhand

Table 5-5 : Population Vs. Bus- Jharkhand

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	31292000	12847	7.50	4.11		
2012	31726000	13561	7.50	4.13	1%	

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2013	32159000	14189	7.51	4.15	1%	
2014	32588000	14846	7.51	4.17	1%	
2015	33020000	15534	7.52	4.19	1%	1.35%

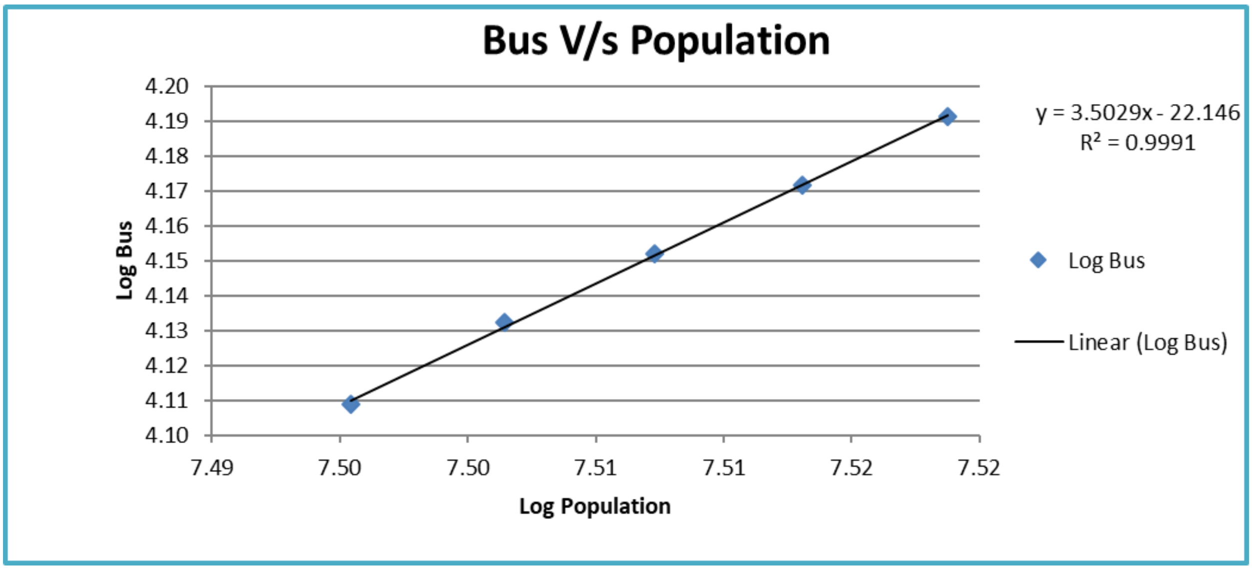

Figure 5-4 : Regression Analysis Population Vs. Bus Jharkhand

Table 5-6 : NSDP Vs. Truck- Jharkhand

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	76134	100257	4.88	5.00		
2012	80157	107769	4.90	5.03	5%	
2013	86861	114903	4.94	5.06	8%	
2014	94121	121031	4.97	5.08	8%	
2015	102196	127374	5.01	5.11	9%	7.65%

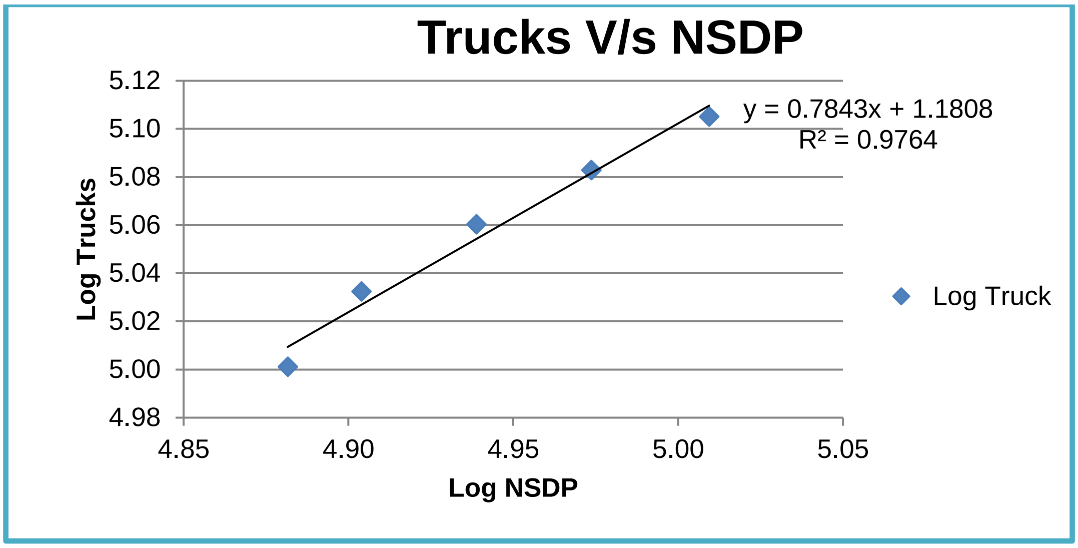

Figure 5-5 : Regression Analysis NSDP Vs. Jharkhand

Summary of regression analysis for elasticity and growth estimation for Jharkhand are given in following table.

Table 5-7 : Summary Regression Analysis- Jharkhand

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
JHARKHAND	Car/Jeep	PCI	y = 1.994x - -3.2317	R^2 = 0.9894	1.9940	6.21%	12.38%	Good Regression
	Bus	Population	y = 3.5029x - - 22.1461	R^2 = 0.9991	3.5029	1.35%	4.74%	Good Regression
	Truck	NSDP	y = 0.7843x - 1.1808	R^2 = 0.9764	0.7843	7.65%	6.00%	Good Regression

Similar analysis for the state of Bihar is presented in the table and regression graphs given below.

Table 5-8 : Per Capita Income Vs. Car- Bihar

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	12090	136845	4.08	5.14		
2012	13149	160340	4.12	5.21	9%	
2013	14356	184792	4.16	5.27	9%	
2014	15506	208205	4.19	5.32	8%	
2015	16801	235762	4.23	5.37	8%	8.6%

Regression analysis of above is given in following figure.

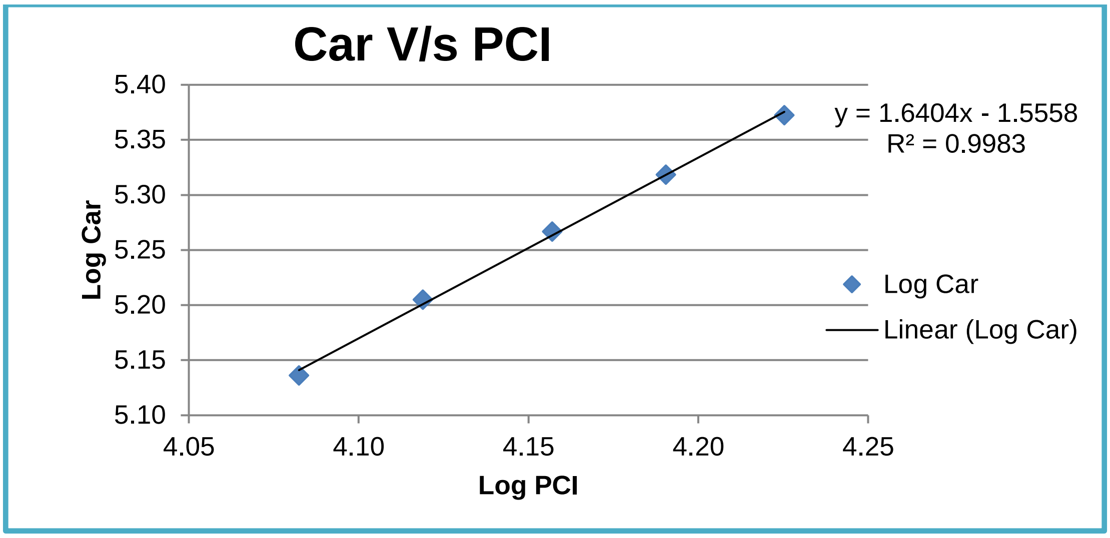

Figure 5-6 : Regression Analysis Car Vs. PCI Bihar

Table 5-9 : Population Vs. Bus- Bihar

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	104099452	22703	8.02	4.36		
2012	106763632	24097	8.03	4.38	3%	
2013	109441349	25992	8.04	4.41	3%	
2014	112131327	27638	8.05	4.44	2%	
2015	114832300	29384	8.06	4.47	2%	2%

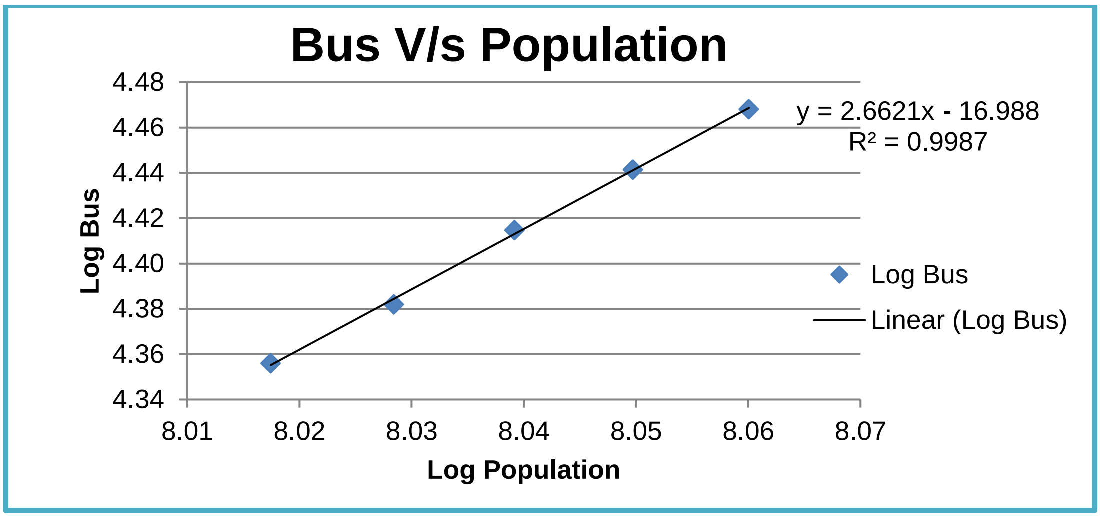

Figure 5-7 : Regression Analysis Population Vs. Bus Bihar

Table 5-10 : NSDP Vs. Truck- Bihar

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	11750314	73472	7.07	4.87		
2012	12952142	83191	7.11	4.92	10%	
2013	14324962	103211	7.16	5.01	11%	
2014	15667055	109010	7.19	5.04	9%	
2015	17180244	123744	7.24	5.09	10%	10%

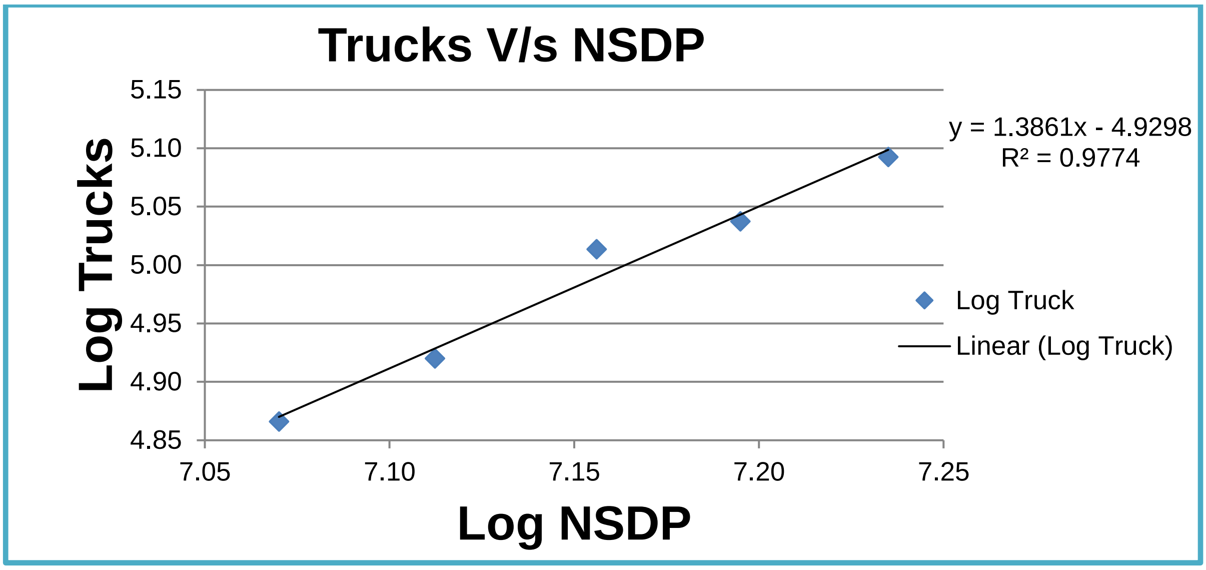

Figure 5-8 : Regression Analysis NSDP Vs. Truck Bihar

Summary of regression analysis for elasticity and growth estimation for Biharis given in following table

Table 5-11 : Summary Regression Analysis- Bihar

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
BIHAR	Car/Jeep	PCI	y = 1.6404x - - 1.5558	R^2 = 0.9983	1.6404	8.58%	14.07%	Good Regression
	Bus	Population	y = 2.6621x - - 16.988	R^2 = 0.9987	2.6621	2.48%	6.61%	Good Regression
	Truck	NSDP	y = 1.3861x - - 4.9298	R^2 = 0.9774	1.3861	9.96%	13.81%	Good Regression

Table 5-12 : Per Capita Income Vs. Car- Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	17388	984937	4.24	5.99		
2012	18014	1108100	4.26	6.04	4%	
2013	18635	1205374	4.27	6.08	3%	
2014	19233	1423020	4.28	6.15	3%	
2015	20057	1572217	4.30	6.20	4%	4%

Regression analysis of above is given in following figure.

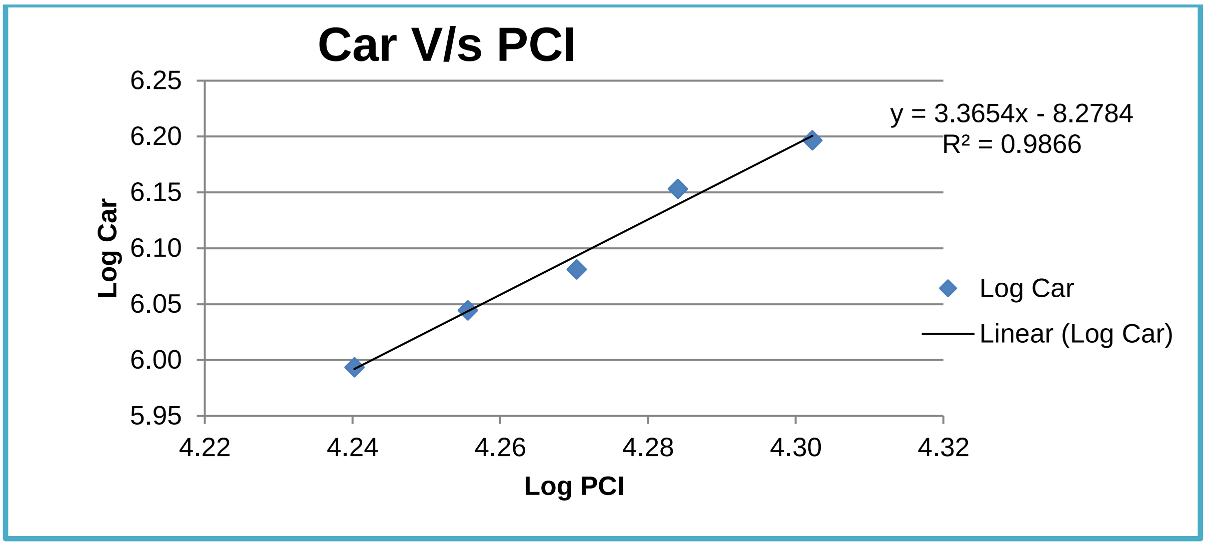

Figure 5-9 : Regression Analysis Car Vs. PCI Uttar Pradesh

Table 5-13 : Population Vs. Bus- Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	199812341	31922	8.30	4.50		
2012	203382046	34428	8.31	4.54	2%	
2013	206942855	40501	8.32	4.61	2%	
2014	210493544	45607	8.32	4.66	2%	
2015	214032922	51866	8.33	4.71	2%	2%

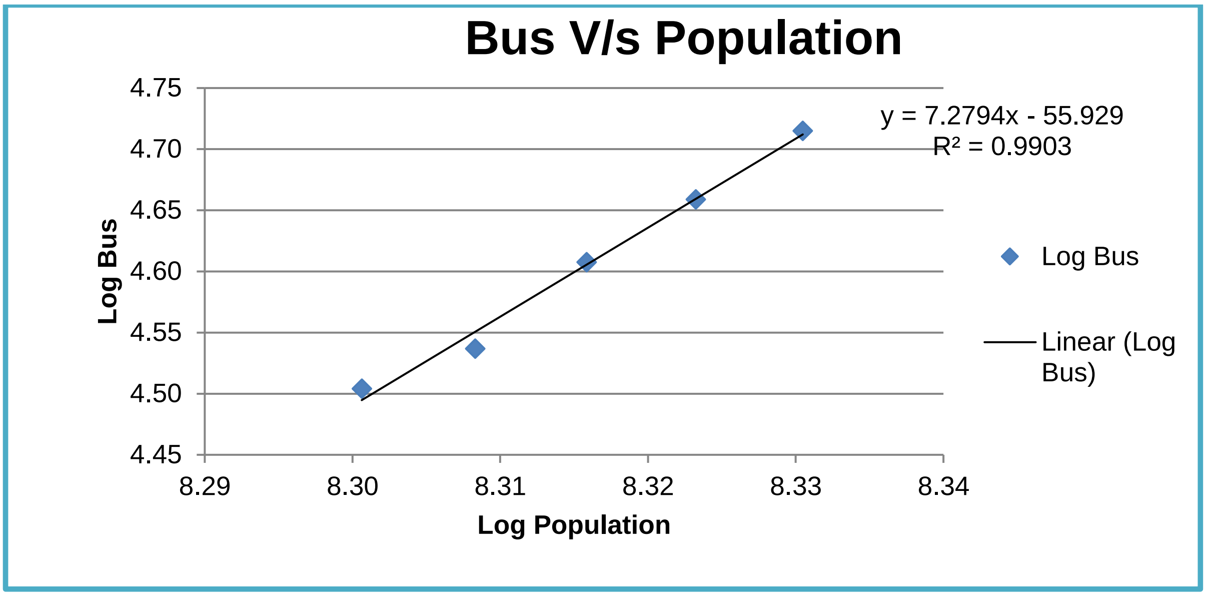

Figure 5-10 : Regression Analysis Population Vs. Bus Uttar Pradesh

Table 5-14 : NSDP Vs. Truck- Uttar Pradesh

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	34662085	307058	7.54	5.49		
2012	36537453	338977	7.56	5.53	5%	
2013	38445814	400061	7.58	5.60	5%	
2014	40350882	467786	7.61	5.67	5%	
2015	42775892	511631	7.63	5.71	6%	5%

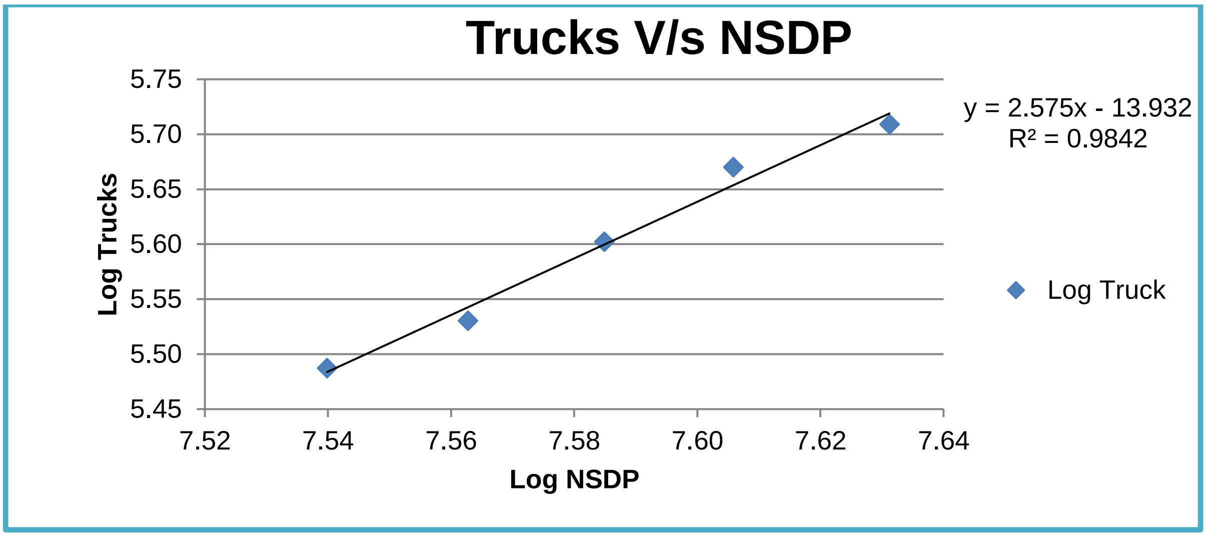

Figure 5-11 : Regression Analysis NSDP Vs. Truck Uttar Pradesh

Summary of regression analysis for elasticity and growth estimation for Uttar Pradesh are given in following table.

Table 5-15 : Summary Regression Analysis- Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Uttar Pradesh	Car/Jeep	PCI	y = 3.3654x - - 8.2784	R^2 = 0.9866	3.3654	3.64%	12.23%	Good Regression
	Bus	Population	y = 7.2794x - - 55.9289	R^2 = 0.9903	7.2794	1.73%	12.62%	Good Regression
	Truck	NSDP	y = 2.575x - -13.9315	R^2 = 0.9842	2.5750	5.40%	13.90%	Good Regression

Table 5-16 : Per Capita Income Vs. Car- Delhi

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	103619	2258434	5.02	6.35		
2012	106677	2303052	5.03	6.36	3%	
2013	112441	2497167	5.05	6.40	5%	
2014	118411	2691282	5.07	6.43	5%	
2015	124698	2859620	5.10	6.46	5%	5%

Regression analysis of above is given in following figure.

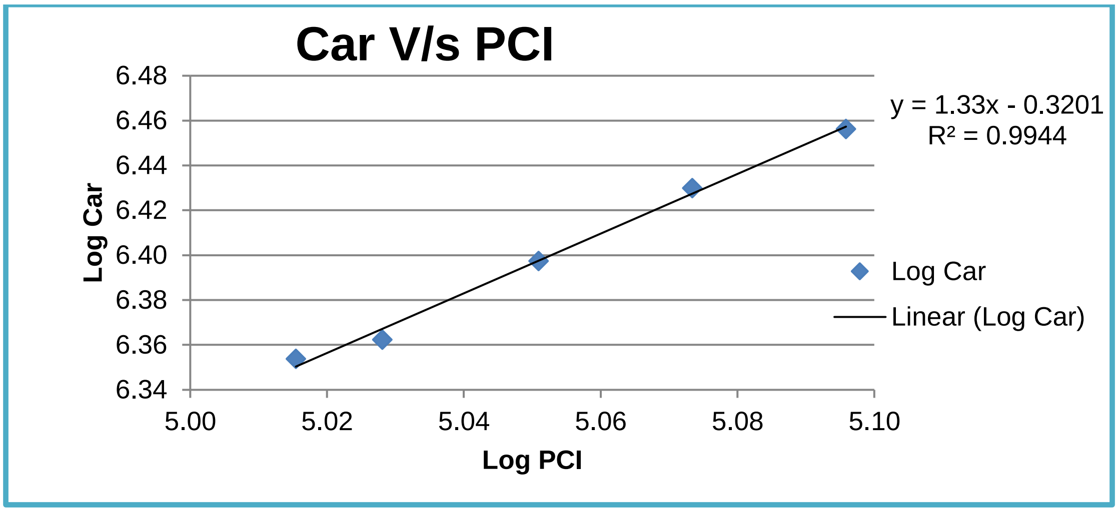

Figure 5-12 : Regression Analysis Car Vs. PCI Delhi

Table 5-17 : Population Vs. Bus- Delhi

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	16622000	135125	7.22	5.13		
2012	16941000	137310	7.23	5.14	2%	
2013	17266000	139495	7.24	5.14	2%	
2014	17597000	141680	7.25	5.15	2%	
2015	17934000	143865	7.25	5.16	2%	1.92%

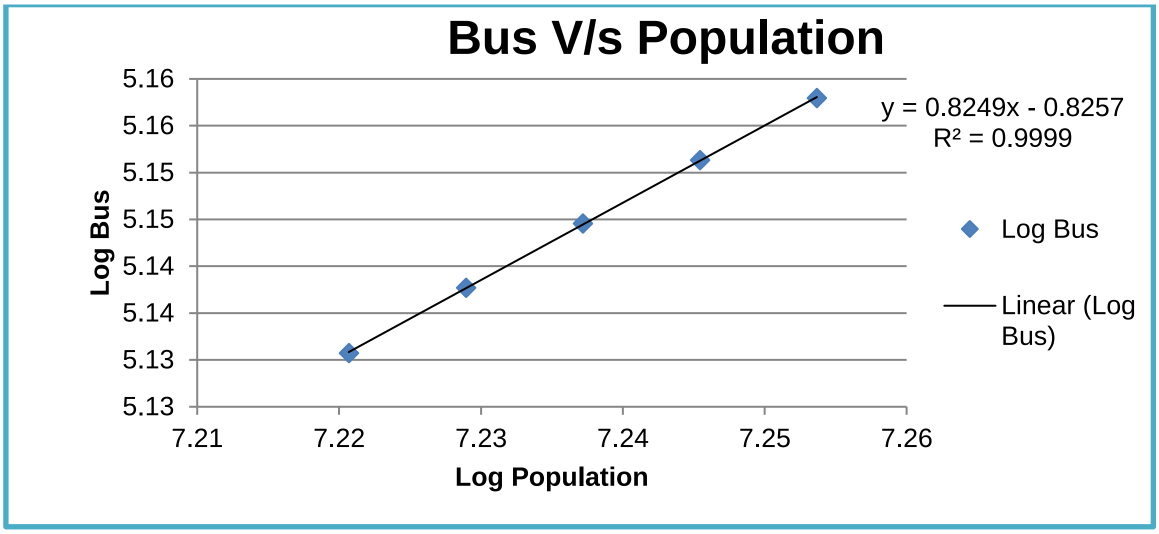

Figure 5-13 : Regression Analysis Population Vs. Bus Delhi

Table 5-18 : NSDP Vs. Truck- Delhi

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	17223524	86301	7.24	4.94		
2012	18072223	87166	7.26	4.94	5%	
2013	19414032	88031	7.29	4.94	7%	
2014	20836819	88896	7.32	4.95	7%	
2015	22562961	89761	7.35	4.95	8%	7%

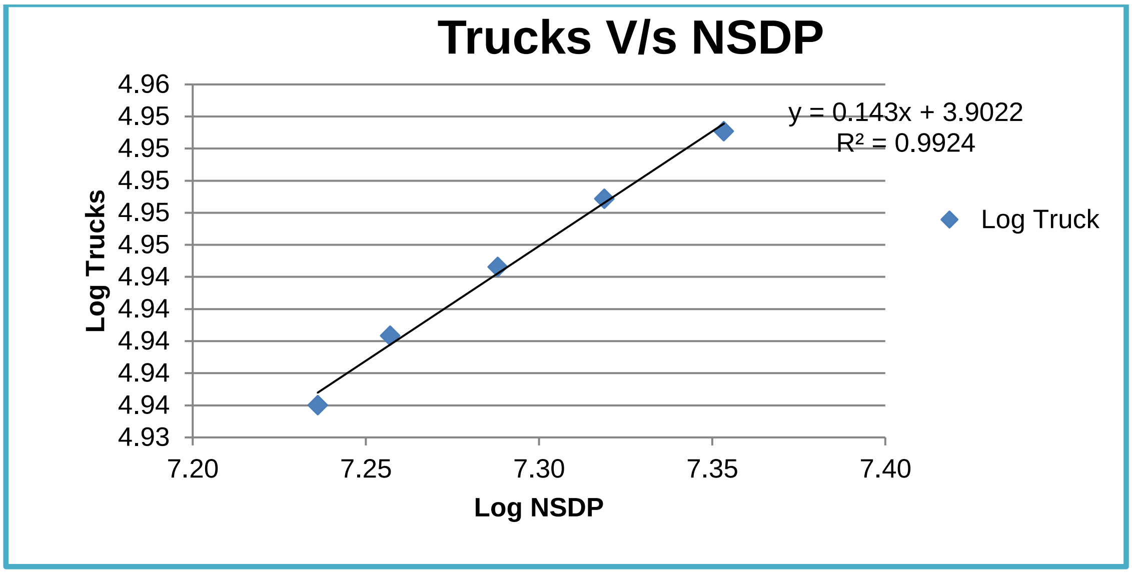

Figure 5-14 : Regression Analysis NSDP Vs. Truck Delhi

Summary of regression analysis for elasticity and growth estimation for Delhi are given in following table.

Table 5-19 : Summary Regression Analysis- Delhi

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Delhi	Car/Jeep	PCI	y = 1.33x - -0.3201	R^2 = 0.9944	1.3300	4.74%	6.31%	Good Regression
	Bus	Population	y = 0.8249x - -0.8257	R^2 = 0.9999	0.8249	1.92%	1.58%	Good Regression
	Truck	NSDP	y = 0.143x - 3.9022	R^2 = 0.9924	0.1430	6.99%	1.00%	Good Regression

Since most of the passenger traffic is from West Bengal and Jharkhand only, growth from economical model is considered only from these states. For commercial traffic weighted impact of these states in ratio of their respective share is considered

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trends of growth. Project stretch of Agra to Etawah has recently been commissioned and is under tolling operation since 2022 with concessionaire. Hence, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. Moreover, the part two years traffic is affected by COVID-19 impact. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economic, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

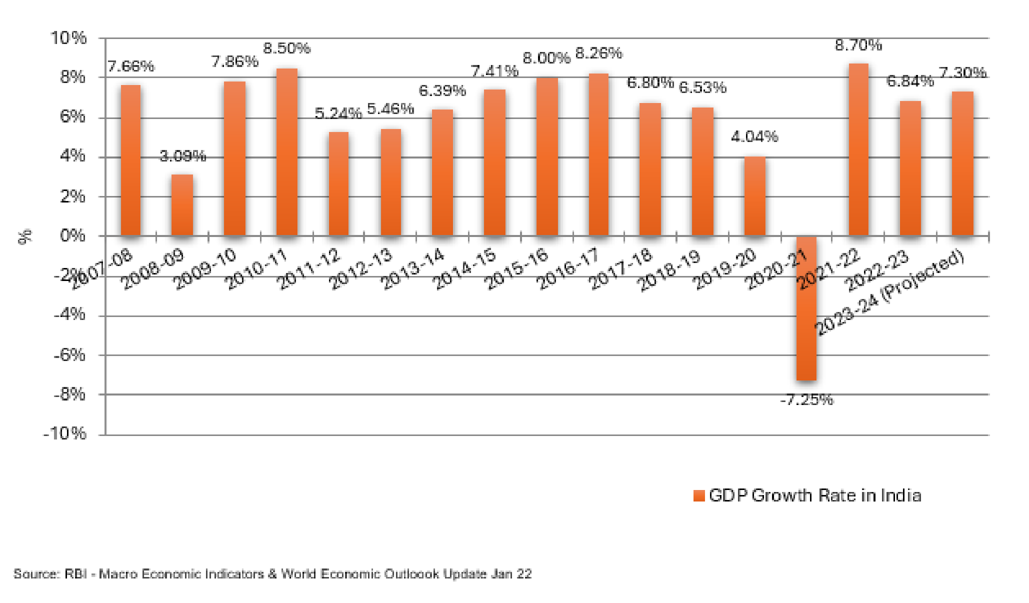

Figure 5-15 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in next year 2022-23

5.6 Developments along and around the Project Corridor & State

Project stretch falls in one of the most mineral rich areas of India. Major Industries are developed for extraction of minerals and related manufacturing. The following are some major industrial establishments and areas in PIA.

Howrah - Often termed as Sheffield of the East, Howrah is known as an engineering hub, mainly in the area of light engineering industry. In 1823, Bishop Reginald Heber described Howrah as the place "chiefly inhabited by shipbuilders". There are small engineering firms all over Howrah, particularly around Belilios Road area near Howrah station. There are many foundries in Liluah area.

Burn Standard Company, a major company in the heavy engineering industry, has its oldest manufacturing unit located in Howrah. The Howrah plant of Shalimar Paints (established in 1902) was the first large-scale paint manufacturing plant to be set up not only in India but in entire Southeast Asia. The jute industry suffered during the Partition of Bengal (1947), when the larger jute production area became part of East Pakistan (now Bangladesh). The foundry industry saw a decline in demand due to growth in the steel industry. Still Howrah is a major industrial hub in area and Howrah being major terminal on Delhi – Kolkata rail attracts lot of goods movement.

Bardhman - Burdwan was one of the premier districts in India in terms of minerals. The Raniganj coalfield was the birthplace of the Indian coal industry. Besides coal, important minerals found in the district are iron ores, calcium carbonate, abrasives, silica bricks and molding sands, glass sands, building materials, manganese, bauxite, laterite etc. Chittaranjan Locomotives, Bengal Iron Works, IISCO- India Iron and Steel Co are some of major industrial establishments in district.

Dhanbad - Dhanbad have one of the oldest markets of region and is also a hotbed of large-scale industries. It is famous for its coal mines and industrial establishments; the city is surrounded by about 112 coal mines with a total production of 27.5 million tonnes and an annual income of 7000 million rupees through coal business. There are a number of coal washeries present there. BCCL have it headquarter in Dhanbad and SAIL, Tata Steel and Eastern Coalfields (at Mugma) also operates their mines. Om Besco Rail Products.Ltd, a public limited rail wagon manufacturing company at Mugma, Hindustan Zinc Ltd (now Vendanta Resources) had a lead smelting pilot plant at Tundu, MaithonPower.Ltda J.V of Tata Power & DVC (first PPP project of India), HindusthanMalleables& Forgings Ltd, etc. are also operational in and around Dhanbad. Fertilizers Corporation of India (closed), Projects & Development IndiaLtd and ACC.Ltd at Sindri are also available and being one of the 5 divisions of South Eastern Railway zone, Indian Railways is also a big employer in Dhanbad. Also, Kandra Industrial Area at Gobindpur houses some small & middle scale industries

Durgapur- Durgapur is one of the biggest industrial hubs of India and was planned as an integrated industrial town. It lays on the banks of DamodarRiver and coalfields of Raniganj. Durgapur was a dream of former prime minister of India, Jawaharlal Nehru and chief minister of West Bengal, Bidhan Chandra Roy. The first project in Durgapur was Damodar Valley Corporation's Durgapur Barrage which attracted many public sector units. Durgapur Steel Plant was the first PSU established in the region in 1955 with the help of U.K which was later undertook by SAIL.

Durgapur Steel plant

Durgapur Steel Plant set up in late fifties is a leading producer of long products &only producer of Forged Railway Wheels & Axles in the country. Plant started production with an initial crude steel capacity of 1 MPTA (million ton per annum) in 1959, which has been progressively increased to 1.8 MTPA during the modernization in nineties and further to 2.2 MTPA during recently completed Modernization & Expansion Plan (MEP). The present Plant capacity is about 2.12 MTPA saleable steel.

Durgapur is also an emerging I.T and real estate hub has many proposed residential areas like DLF's Durgapur Township.

Kolkata - is the capital of the Indian state of West Bengal. According to the 2011 Indian census, it is the seventh most populous city in India; the city had a population of 4.5 million, while the suburb population brought the total to 14.1 million, making it the third-most populous metropolitan area in India. Kolkata Megalopolis is the area surrounding Kolkata Metropolitan city with additional population. Located on the east bank of the Hooghly River approximately 80 kilometres west of the border with Bangladesh, it is the principal commercial, cultural, and educational centre of East India, while the Port of Kolkata is India's oldest operating port and its sole major riverine port. The city nicknamed the "City of Joy" is widely regarded as the "cultural capital" of India and as of 2019, six Nobel Laureates have been associated with the city. Recent estimates of Kolkata Metropolitan Area's economy have ranged from $60 to $150 billion (GDP adjusted for purchasing power parity) making it the third most-productive metropolitan area in India, after Mumbai and Delhi. One end of project stretch at Dankuni is major gate to city from northern part of India.

Logistics and Warehousing–It is observed that as project stretch is the main connectivity between Kolkata and rest of India (specially north), there are large number of logistic and warehousing establishments on project stretch between Dankuni and Bardhman. Most computer companies have warehouses in Dankuni. As per a recent report an investment of Rs.4300 cr is expected in West Bengal by 2020 (May be delayed now due to COVID-19.)

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-20 : Recommended Growth Rates Optimistic

Category / Year	2024-2025	2025-2030	2030-2035	2035-2040	2039-2044	2044-2049
Car/Jeep/Van	9.39%	8.58%	5.99%	6.35%	5.18%	4.05%
Bus	5.69%	5.26%	4.81%	4.53%	4.21%	3.93%
Minibus	5.69%	5.26%	4.81%	4.53%	4.21%	3.93%
LCV	2.32%	2.11%	1.71%	1.32%	0.93%	0.55%
2- Axle	3.69%	3.34%	2.68%	2.03%	1.38%	0.75%
3 - Axle	5.41%	4.89%	3.89%	2.91%	1.95%	0.99%
4 to 6 Axle	6.45%	5.82%	4.62%	3.45%	2.29%	1.14%
7 and Above Axle	6.45%	5.82%	4.62%	3.45%	2.29%	1.14%

Table 5-21 : Recommended Growth Rates Pessimistic

Category / Year	2024-2025	2025-2030	2030-2035	2035-2040	2039-2044	2044-2049
Car/Jeep/Van	8.89%	8.08%	5.49%	5.85%	4.68%	3.55%
Bus	5.19%	4.76%	4.31%	4.03%	3.71%	3.43%
Minibus	5.19%	4.76%	4.31%	4.03%	3.71%	3.43%
LCV	1.82%	1.61%	1.21%	0.82%	0.43%	0.05%
2- Axle	3.19%	2.84%	2.18%	1.53%	0.88%	0.25%
3 - Axle	4.91%	4.39%	3.39%	2.41%	1.45%	0.49%
4 to 6 Axle	5.95%	5.32%	4.12%	2.95%	1.79%	0.64%
7 and Above Axle	5.95%	5.32%	4.12%	2.95%	1.79%	0.64%

Table 5-22 : Recommended Growth Rates Most Likely

Category / Year	2024-2025	2025-2030	2030-2035	2035-2040	2039-2044	2044-2049
Car/Jeep/Van	9.14%	8.33%	5.74%	6.10%	4.93%	3.80%
Bus	5.44%	5.01%	4.56%	4.28%	3.96%	3.68%
Minibus	5.44%	5.01%	4.56%	4.28%	3.96%	3.68%
LCV	2.07%	1.86%	1.46%	1.07%	0.68%	0.30%

Category / Year	2024-2025	2025-2030	2030-2035	2035-2040	2039-2044	2044-2049
2- Axle	3.44%	3.09%	2.43%	1.78%	1.13%	0.50%
3 - Axle	5.16%	4.64%	3.64%	2.66%	1.70%	0.74%
4 to 6 Axle	6.20%	5.57%	4.37%	3.20%	2.04%	0.89%
7 and Above Axle	6.20%	5.57%	4.37%	3.20%	2.04%	0.89%

Traffic and revenue have been worked out on the basis of the above growths and some is presented in subsequent chapter of report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza Dankuni- Chainage 646.005 KM (Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	10935	1031	788	2542	2018	8799	9	26121	68159
2024-25	11962	1054	832	2636	2127	9366	9	27986	72516
2025-26	12987	1076	876	2724	2231	9911	9	29814	76734
2026-27	14101	1099	922	2816	2340	10488	9	31775	81220
2027-28	15310	1122	971	2910	2454	11098	9	33874	85980
2028-29	16622	1145	1022	3007	2574	11744	9	36123	91037
2029-30	18047	1169	1076	3107	2699	12427	9	38534	96409
2030-31	19128	1189	1127	3191	2804	13002	9	40450	100827
2031-32	20274	1209	1181	3276	2913	13603	9	42465	105452
2032-33	21488	1229	1237	3364	3026	14232	9	44585	110297
2033-34	22775	1250	1297	3454	3143	14890	9	46818	115378
2034-35	24139	1271	1359	3546	3265	15578	9	49167	120697
2035-36	25671	1287	1420	3618	3360	16115	9	51480	125354
2036-37	27300	1304	1485	3692	3458	16670	9	53918	130217

Table 6-2 : Total Tollable Traffic @ Toll Plaza Dankuni- Chainage 646.005 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversize d Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	10935	1031	788	2542	2018	8799	9	26121	68159
2024-25	11907	1050	828	2623	2118	9323	9	27858	72183
2025-26	12869	1066	867	2697	2211	9819	9	29538	76019
2026-27	13908	1084	908	2774	2308	10341	9	31332	80079
2027-28	15031	1102	951	2853	2409	10891	9	33246	84373
2028-29	16245	1120	996	2934	2514	11470	9	35288	88913
2029-30	17557	1138	1044	3018	2624	12080	9	37470	93723

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversize d Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2030-31	18521	1152	1089	3084	2713	12579	9	39147	97553
2031-32	19538	1166	1135	3151	2805	13098	9	40902	101542
2032-33	20611	1180	1184	3220	2901	13638	9	42743	105708
2033-34	21742	1194	1235	3291	2999	14201	9	44671	110053
2034-35	22935	1208	1289	3363	3101	14787	9	46692	114588
2035-36	24276	1217	1341	3414	3176	15222	9	48655	118434
2036-37	25696	1227	1395	3466	3253	15670	9	50716	122434

Traffic projections for Most Likely scenario is given as under

Table 6-3 : Total Tollable Traffic @ Toll Plaza Dankuni- Chainage 646.005 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	10935	1031	788	2542	2018	8799	9	26121	68159
2024-25	11934	1052	831	2630	2122	9344	9	27922	72350
2025-26	12928	1072	873	2712	2220	9865	9	29679	76384
2026-27	14004	1092	917	2796	2323	10415	9	31556	80658
2027-28	15170	1112	963	2883	2431	10995	9	33563	85187
2028-29	16433	1132	1011	2972	2544	11607	9	35708	89984
2029-30	17801	1153	1061	3064	2662	12253	9	38003	95071
2030-31	18823	1169	1110	3138	2759	12789	9	39797	99189
2031-32	19904	1186	1160	3214	2860	13348	9	41681	103492
2032-33	21047	1204	1213	3292	2964	13932	9	43661	107995
2033-34	22255	1222	1268	3372	3072	14542	9	45740	112704
2034-35	23532	1240	1326	3454	3184	15178	9	47923	117626
2035-36	24967	1253	1382	3515	3269	15663	9	50058	121869
2036-37	26490	1266	1441	3578	3356	16164	9	52304	126293

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Palsit - Dankuni project three target traffic have been defined in Article 29.

Target Date - 1st May 2026 Target Traffic 65830

Target Date - 1st May 2031 Target Traffic 100822

Target Date - 1st May 2036 Target Traffic 130452

It was observed that as per traffic projections, average traffic volume exceeds target traffic in the first two target points. Probable shortening of concession period is estimated according to Article 29 of concession agreement for all cases which comes to about 3 years.

Pessimistic

Sr. No	Target Date	Target Traffic	Actual Traffic	Variation in CP as per CA %	Change in CP (Days	Total Variation in CP Years
1	01-May-26	65830	80079	-16.65%	-785	**-2.2**
2	01-May-31	98003	101542	0.00%	0	
3	01-May-36	125125	122434	0.00%	0	

Optimistic

Sr. No	Target Date	Target Traffic	Actual Traffic	Variation in CP as per CA %	Change in CP (Days	Total Variation in CP Years
1	01-May-26	65830	81220	-18.38%	-867	**-2.5**
2	01-May-31	99459	105452	-1.02%	-30	
3	01-May-36	128286	130217	0.00%	0	

Most Likely

Sr. No	Target Date	Target Traffic	Actual Traffic	Variation in CP as per CA %	Change in CP (Days	Total Variation in CP Years
1	01-May-26	65830	80658	-17.52%	-827	**-2.3**
2	01-May-31	98742	103492	0.00%	0	
3	01-May-36	126069	126293	0.00%	0	

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories, and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Surat-Dahisar section of NH-8 is based on the old toll policy. As per the Toll Notification (Schedule -G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued at fee 50 time the single journey fee at 2/3rd Rate.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: Local Car Jeep Van -Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza). Additionally, local commercial vehicles are charged at 50% rate of single journey.

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A} - \text{WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2021-22. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. Following graph provides projection of rate of inflation (WPI) in India. Data has been taken from Office of Economic Advisor web site (www.eaindustry.nic.in). WPI for years 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

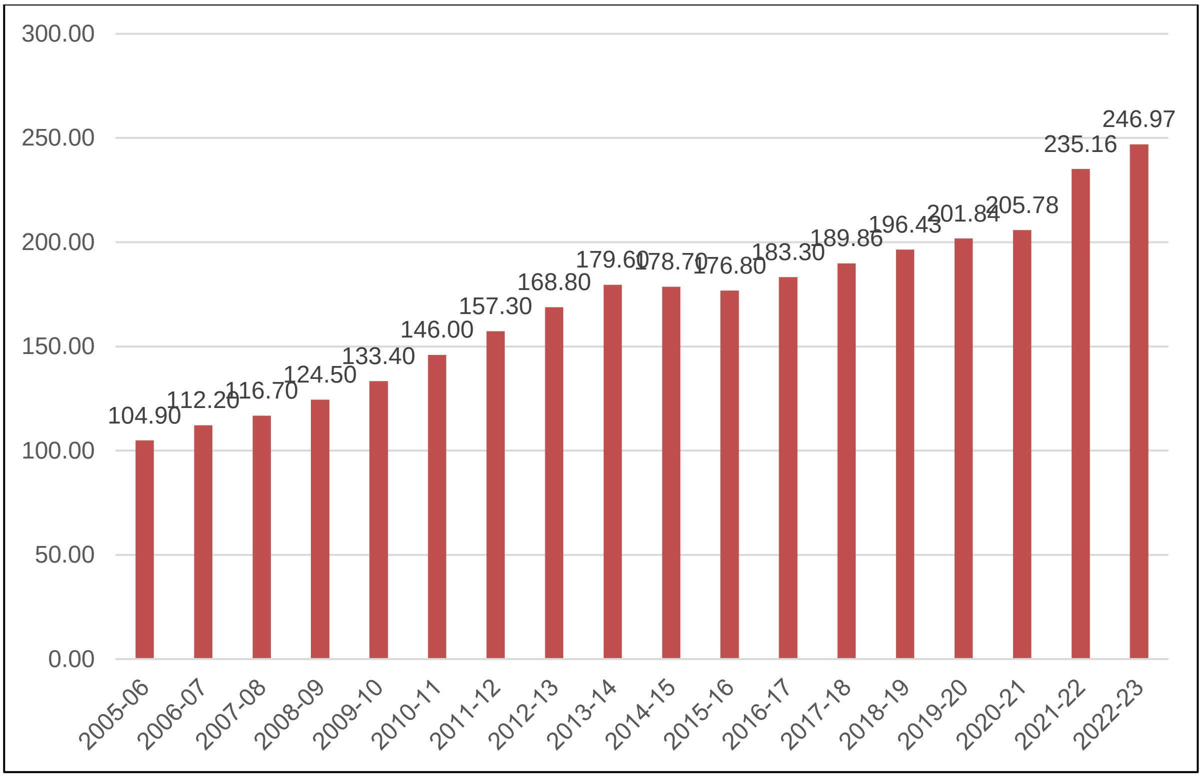

Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey Dankuni @ Km 646.005

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2023-24	75	120	250	250	270	390	475
2024-25	75	120	250	250	270	390	475
2024-25	115	185	380	380	415	600	730
2025-26	120	190	395	395	430	620	750
2026-27	125	200	415	415	455	650	790
2027-28	135	210	435	435	475	685	830
2028-29	140	220	460	460	500	720	875
2029-30	145	235	485	485	525	755	920
2030-31	155	245	510	510	555	795	965
2031-32	160	260	535	535	585	835	1015
2032-33	170	270	560	560	615	880	1070
2033-34	180	285	590	590	645	925	1125
2034-35	190	300	625	625	680	975	1185
2035-36	200	315	655	655	715	1025	1245
2036-37	210	335	690	690	755	1080	1310

Table 7-3: Toll Rates for Return Journey Dankuni @ Km 646.005

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2023-24	110	175	370	370	405	585	710
2024-25	110	175	370	370	405	585	710
2024-25	170	275	575	575	625	900	1090
2025-26	180	285	595	595	650	930	1130
2026-27	190	300	625	625	680	975	1185
2027-28	200	315	655	655	715	1025	1245
2028-29	210	335	690	690	750	1075	1310
2029-30	220	350	725	725	790	1135	1375
2030-31	230	370	765	765	830	1190	1450
2031-32	245	385	800	800	875	1255	1525
2032-33	255	405	845	845	920	1320	1605
2033-34	270	430	890	890	970	1385	1685
2034-35	285	450	935	935	1020	1460	1775
2035-36	295	475	985	985	1070	1535	1870
2036-37	315	500	1035	1035	1130	1620	1970

Table 7-4: Toll Rates for Monthly pass Local Dankuni @ Km 646.005

Year	Car	Minibus /LCV
2023-24	315	315
2024-25	315	315
2024-25	340	340
2025-26	350	350
2026-27	365	365
2027-28	385	385
2028-29	405	405
2029-30	425	425
2030-31	445	445
2031-32	470	470
2032-33	495	495
2033-34	520	520
2034-35	550	550
2035-36	580	580
2036-37	610	610

Table 7-5: Toll Rates for Monthly Pass Dankuni @ Km 646.005

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2023-24	2440	3945	8265	8265	9015	12960	15775
2024-25	2440	3945	8265	8265	9015	12960	15775
2024-25	3820	6125	12745	12745	13900	19950	24270
2025-26	4010	6385	13205	13205	14390	20620	25070
2026-27	4210	6705	13875	13875	15120	21670	26345
2027-28	4425	7045	14580	14580	15890	22775	27690
2028-29	4645	7405	15325	15325	16705	23940	29110
2029-30	4885	7780	16115	16115	17565	25170	30605
2030-31	5135	8180	16945	16945	18470	26470	32185
2031-32	5395	8605	17820	17820	19425	27845	33855
2032-33	5675	9050	18750	18750	20435	29295	35620
2033-34	5970	9520	19730	19730	21505	30825	37485
2034-35	6280	10015	20765	20765	22630	32445	39455
2035-36	6605	10545	21855	21855	23825	34155	41535
2036-37	6955	11100	23015	23015	25085	35965	43735

7.3 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.4 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza starting from the year 2023-24 are shown in tables below.

Table 7-3 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	Total
2023-24	185.82	**185.82**
2024-25	250.82	**250.82**
2025-26	332.28	**332.28**
2026-27	368.88	**368.88**
2027-28	412.13	**412.13**
2028-29	456.71	**456.71**
2029-30	507.53	**507.53**
2030-31	558.47	**558.47**
2031-32	615.54	**615.54**
2032-33	675.18	**675.18**
2033-34	742.81	**742.81**
2034-35	819.03	**819.03**
2035-36	894.57	**894.57**
2036-37	977.07	**977.07**

Table 7-4 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	Total
2023-24	185.82	**185.82**
2024-25	249.62	**249.62**
2025-26	329.13	**329.13**
2026-27	363.66	**363.66**
2027-28	404.37	**404.37**
2028-29	446.03	**446.03**
2029-30	493.37	**493.37**
2030-31	540.22	**540.22**
2031-32	592.59	**592.59**
2032-33	646.92	**646.92**
2033-34	708.39	**708.39**
2034-35	777.39	**777.39**
2035-36	844.99	**844.99**
2036-37	918.45	**918.45**

Table 7-5 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	Total
2023-24	185.82	**185.82**
2024-25	250.21	**250.21**
2025-26	330.70	**330.70**
2026-27	366.25	**366.25**
2027-28	408.22	**408.22**
2028-29	451.35	**451.35**
2029-30	500.44	**500.44**
2030-31	549.33	**549.33**
2031-32	604.00	**604.00**
2032-33	660.97	**660.97**
2033-34	725.50	**725.50**
2034-35	797.97	**797.97**
2035-36	869.43	**869.43**
2036-37	947.34	**947.34**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Palsit to Dankuni section of NH-19 from km 588.870 to km 652.700 in state of West Bengal is currently four lane road and being upgraded to six lanes. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the most busy and prominent national highway NH-19 which connects political and cultural capitals of India. This is one of the most important trunk roads which spreads across many states. There are large number of townships, industrial corridors and other business establishments coming up along the project corridor. As discussed, the dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give a positive impact to traffic flow on the project. The following can be considered as major outcomes of the study.

a) There is a good amount of tollable traffic running on the project.

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy.

c) The Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on the above it can be considered a stable healthy project from the traffic and revenue point of view.

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Nehru Outer Ring Road in Hyderabad from Km 0.000 to Km 158.000 in State of Telangana on TOT mode

MARCH 2024

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

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Nehru Outer Ring Road in Hyderabad from Km 0.000 to Km 158.000 in State of Telangana on TOT mode

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

MARCH 2024

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CHAPTER 1

INTRODUCTION

1.1 Background

The Outer Ring Road, officially as, Jawaharlal Nehru Outer Ring Road and abbreviated as, O.R.R., is a 158 kilometer, 8-lanes ring road expressway encircling Hyderabad, capital of the Indian state of Telangana. The expressway is designed for speeds up to 100 km/h. A large part, 124 km (covering urban nodes viz., Hi- Tech city, Nanakramguda Financial District, Rajiv Gandhi International Airport, IKP Knowledge park, Hardware Park, Telangana State Police Academy, Singapore Financial District, and Games village) of the 158-km was opened by December 2012. Rest of the length of Outer Ring Road was opened to traffic in year 2015-16. Hence onward, for ease of reference, Nehru Outer Ring Road will be referred as NORR or ORR.

ORR is one of the most important infrastructural developments which has complimented growth of Hyderabad as major metro of India. On Eastern side it has provided express connectivity to major commercial and upscale residential centres of Gachibowli, Banjara Hills, Jublee Hills, Hitec- City, Manikonda, Nanakramguda. As a result, large number of residential and commercial projects have come up on this north-east part of ORR. Tellapur, Mokila, Kollur, Narsingi can be named as few of these. On north and western side ORR connects to Shamirpet and Genome Valley.

ORR also provides fast connectivity to various radial state and national highways connecting to Mumbai, Nagpur, Karimnagar, Warangal, Suryapet, Vijayawada, Bengaluru. Regional traffic now does not need to go into congested network of Hyderabad.

The Outer Ring Road also helps in reducing the travel time from Rajiv Gandhi International Airport to cities like Nizamabad & Adilabad as it connects to NH44. The expressway is fenced, and 33 radial roads connect it with the Inner Ring Road.

ORR is fully accessing controlled road and traffic can enter or exit from designated locations only. There is total 19 locations from where ORR can be entered or exited. Toll plaza and or booths have been placed at all such entry / exit points.

ORR has been developed by Hyderabad Metropolitan Development Authority (HMDA). It’s maintained by HMDA and special purpose vehicle Hyderabad Growth Corridor Limited (HGCL). The bid for Operation, Maintenance of ORR for a longer concession period of 30 years on TOT model is invited by HMDA and HGCL.

Following figure show alignment of Hyderabad Outer Ring Road in regional context.

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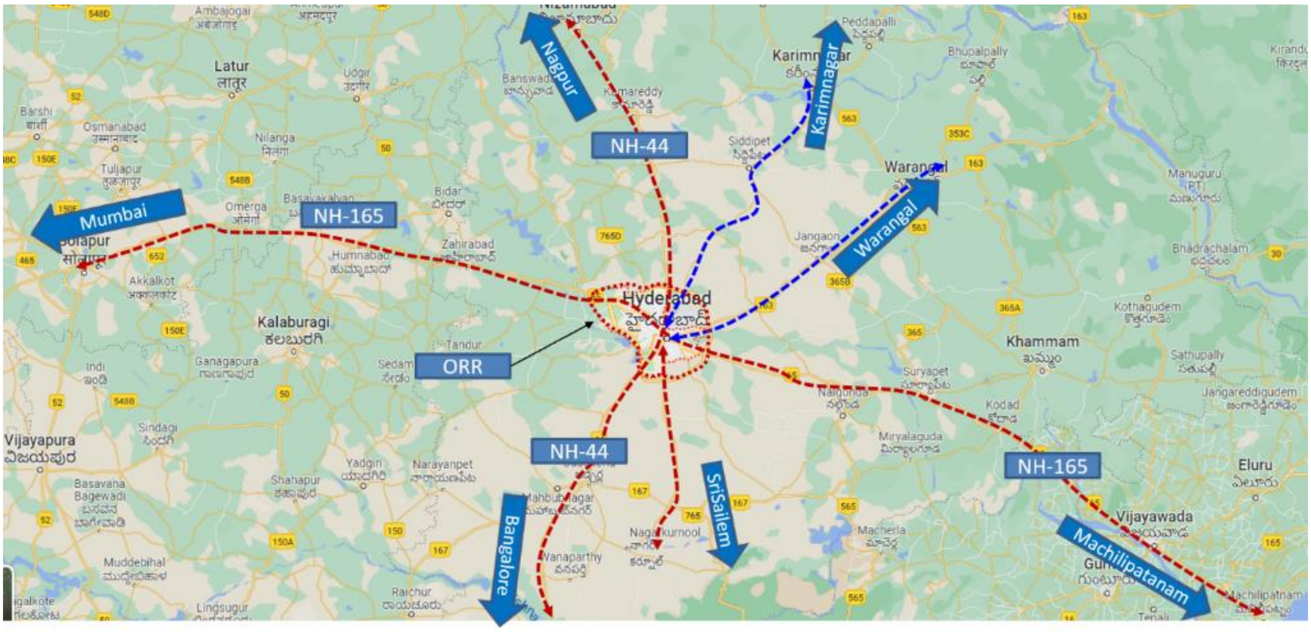


Figure 1-1: Location & Alignment of ORR in Regional Context

M/s IRB Infrastructure Developers Limited (IRB) intends to participate in bidding for Nehru Outer Ring Road (NORR) on TOT basis.

GMD Consultants have been assigned by M/s IRB for the wok of conducting traffic study and developing revenue model based on traffic projections and forecast.

For making the proper assessment of traffic volume on project stretch, base year traffic and its projection.

CHAPTER 2

PROJECT DETAILS

2.1 Brief Description of the Project Influence Area (PIA)

Nehru Outer Ring Road is a 158 km access-controlled transportation ring around city of Hyderabad and Secundrabad Average radial distance of ORR from city centre is about 20-25 km. Hyderabad is fourth most populous city of India. It is capital of one of the fastest growing states of India, Telangana. Hyderabad if merging and the major global hum in field of IT, IT&ES, Pharmaceutical & Biotechnical Research. As discussed previously it provides fast connectivity to Airport (near Shamsabad) from various parts of city. Following figure show positioning of ORR in city context.

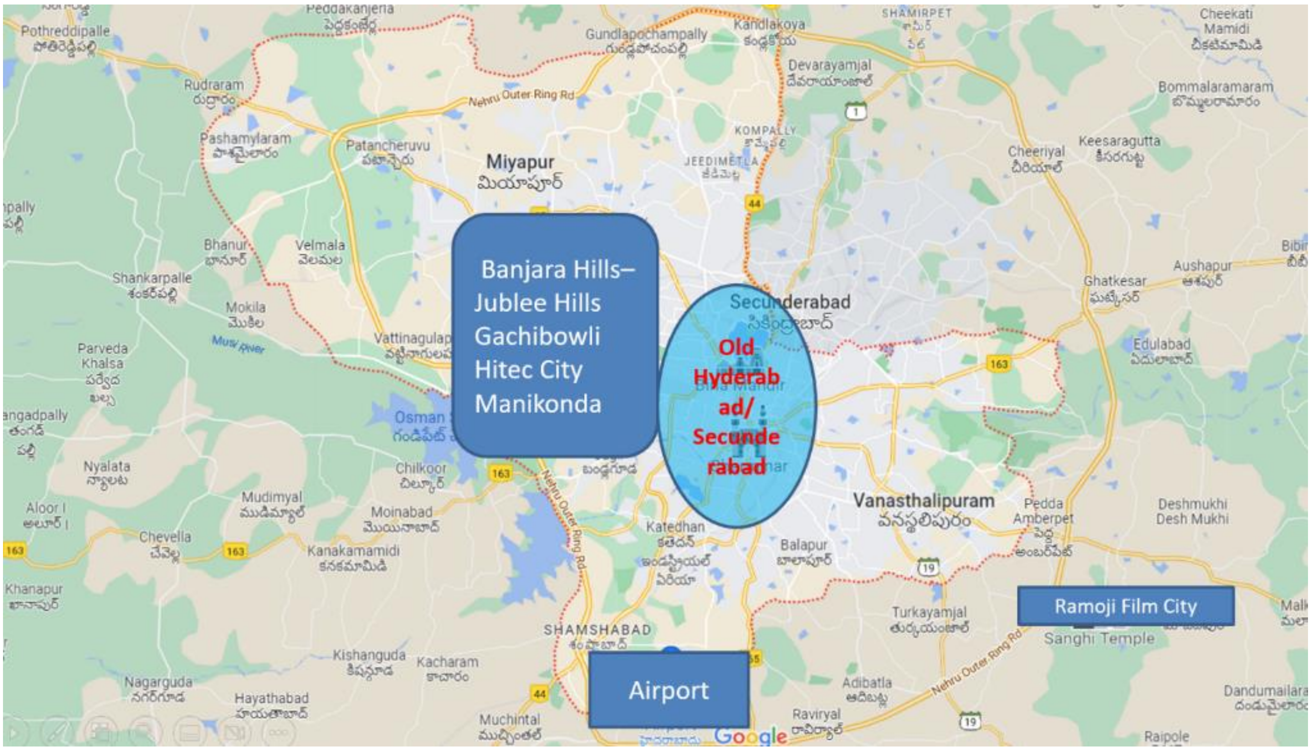


Figure 2-1: Positioning of ORR in city context.

NORR makes a complete circle around city of Hyderabad and Secunderabad. It provides fast connectivity to all part of Hyderabad Metropolitan Area (HMA). Hyderabad Metropolitan Area includes part of following districts.

- **Hyderabad** - Hyderabad district is a most populous district in the state of Telangana in India that contains a part of the metropolitan area of Hyderabad.
- **Rangareddy** – This is basically rural Hyderabad area. It has head quarter in Lakdi ka Pul which is basically part of Hyderabad City only. Ranga Reddy has maximum per capita income in entire state.

- **Nalgonda** – Nalgonda is another district which is part of HMA. This touches southeastern boundary of Hyderabad
- **Mahboob Nagar -** Mahabubnagar district is a district in **Telangana**. Mahabubnagar is the district headquarters which is popularly known as Palamoor. The district shares boundaries with Narayanapet, Vikarabad, Rangareddy, Nagarkurnool, Wanaparthy and Jogulamba Gadwal districts. It is famous for its milk production. It is on southwestern boundary of Hyderabad.
- **Medak –** It was one of the most backward districts of Andhra Pradesh. Now part of this district is in HMA. Geographically it on northwest side of Hyderabad. This is the most developing part of HMA now.

Hence all of HMA fall in immediate influence zone of ORR. In addition to Hyderabad city centre large number of suburban areas which are either developed on are upcoming, are part of PIA. Following figure shows major urban and commercial hubs in relation to ORR.

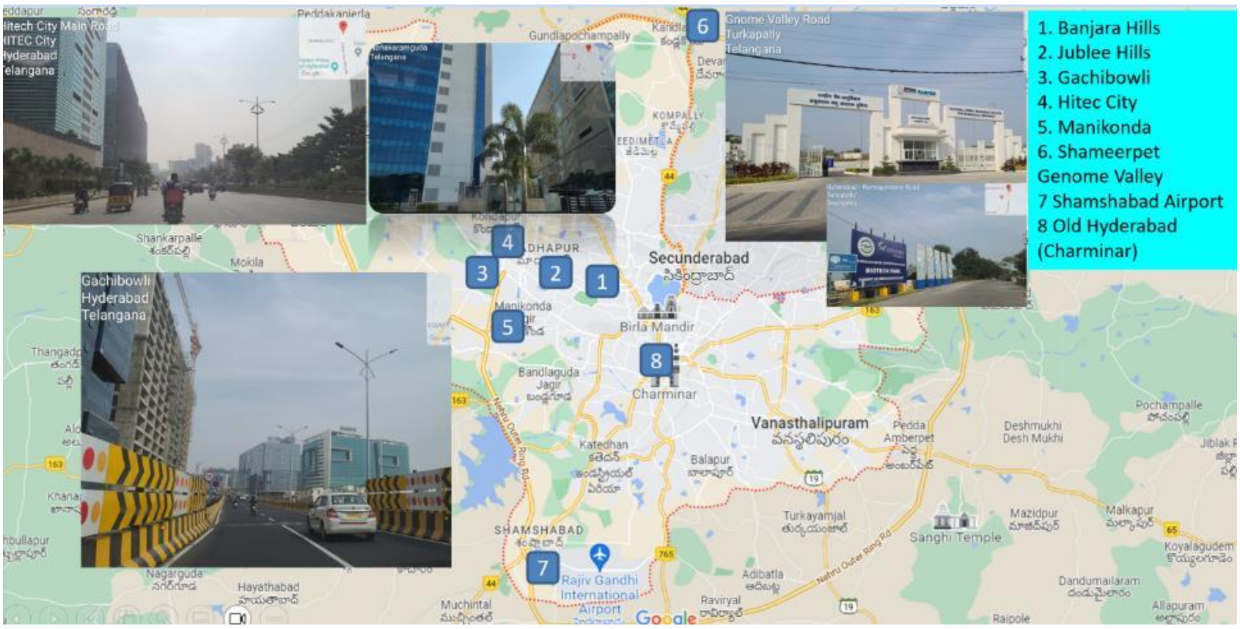


Figure 2-2: Major urban & commercial hubs.

Additionally large number of new commercial and urban centres are in various phase of development around ORR. In fact, ORR has been one of the reasons for developing of these centres. Most of these centres are coming up in northwest corner of Hyderabad in which major commercial and residential centres like Gachibowli. Manikonda, Banjara Hills, Jublee Hills etc have already developed along with Financial District and Hitec City. Following figure shows these locations in context of ORR.

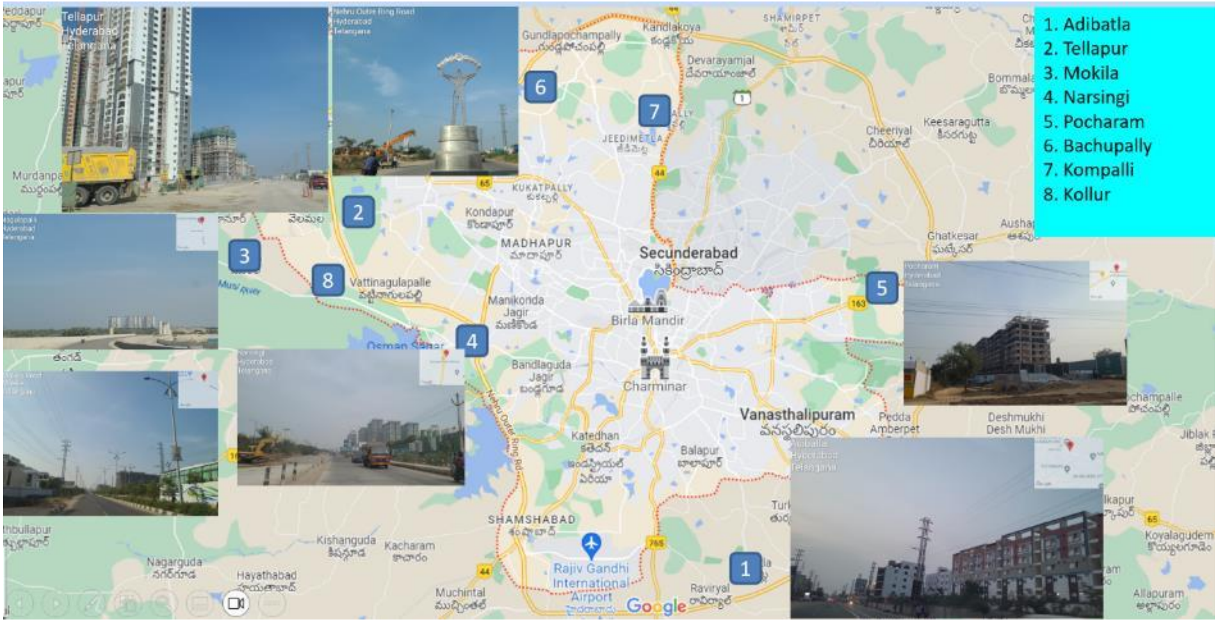


Figure 2-3: Upcoming Development Locations in context of ORR.

Prominent of above are discussed as under.

Tellapur
Being in close proximity to Gachibowli, Kondapur, and Madhapur, Tellapur is an ideal settlement place for IT Professionals. Since it is around 15 km from Hitech city and 9-10 km from Gachibowli, the new investment options in the area are relatively better and easier to settle as well. Tellapur comes in the Medak district.

Narsingi
The western outskirts are home to Narsingi. This area is attracting many potential investors due to the presence of multiple residential options like villas, gated communities, community apartments, and so on. It is the best option for people who are family oriented and would want to settle down there. Housing investment options are available in Narsingi. If you’re a modern home buyer, Narsingi is an ideal option.

Adibatla
Adibatla is an area located in Ranga Reddy district and is a fast-upcoming residential area that offers budget-friendly properties starting from 20 lakhs only. The main attraction of the area is ITIR (Information Technology Investment Region) as it is said that there will be many IT Parks as it’s SEZ (Special Economic Zone). As a result of IT and aviation companies setting up offices in the area, Adibatla has already transformed into a modern infrastructural hub.

Mokila
Located approximately 35 kilometres away from Hyderabad city, Mokila’s biggest advantage is its proximity to HiTech City, IT hubs like Kokapet, and prime neighbourhoods like Gachibowli. Well-connected via the Outer Ring Road (ORR), Mokila has witnessed a consistent increase in prices in recent years. The airport is around 40 kilometres away but takes just under an hour to reach via the ORR while Nagulapalli and Shankarpalli railway stations, and Miyapur metro station are both within a 10-kilometre radius.

Pocharam

The demand for residential real estate in Pocharam soared incredibly after the AP Housing Board set up the Singapore Township in 2005-06, which was a fully integrated and well-planned township comprising 2000 houses. Later, Infosys set up a 440-acre campus and with other IT companies following suit the area has seen increased commercial real estate activity, as well.

In addition to above ORR connects following radial arterial roads which connect Hyderabad to various important parts of state and country. Following figure shows such radial roads in context of ORR.

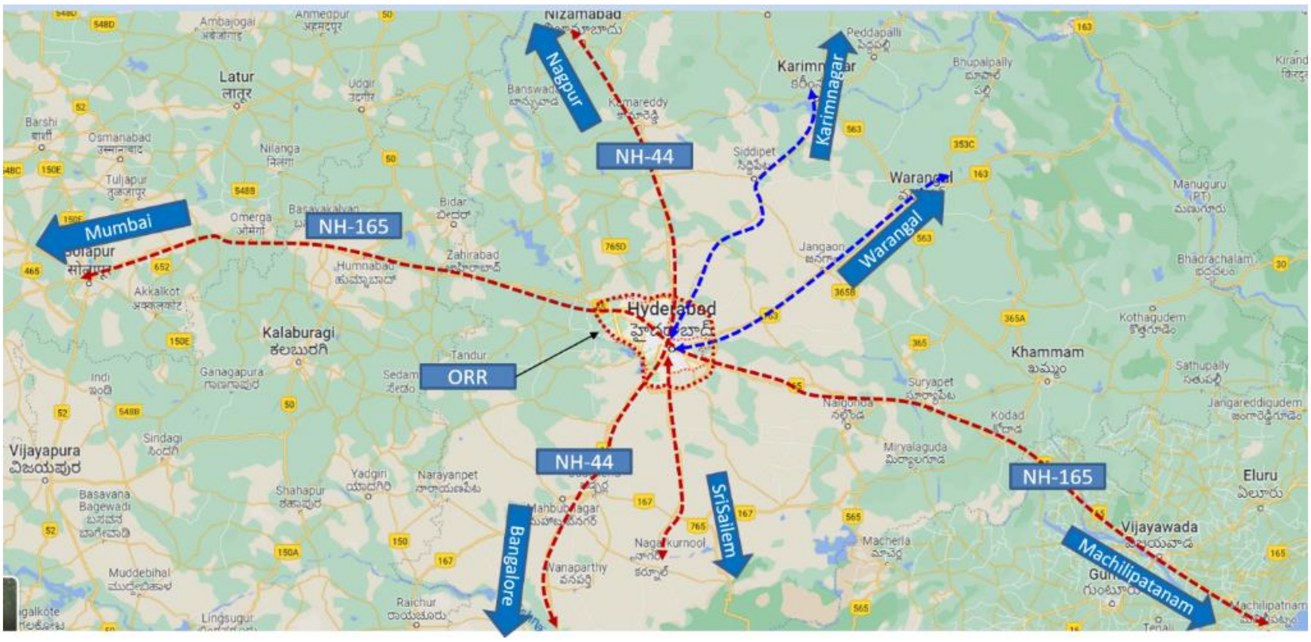
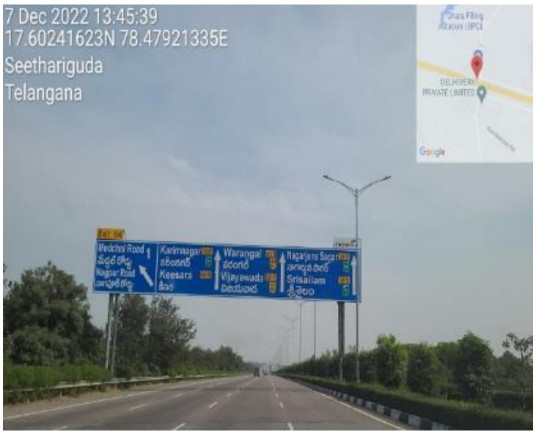


Figure 2-4: Regional context of ORR.

1. **NH-165 –** This is major highway which connects to Maharashtra / Pune / Solapur on western side and Suryapet, Vijayawada and Machilipatnam on eastern side. Interchange and toll plaza is constructed at Patancheru and Pedda Amberpet at crossing locations of ORR and NH-165
2. **NH-44 –** This north south connecting NH connects Hyderabad with Nagpur on north side and Bengaluru on south side. Medchal and Shamshabad interchange and Toll plazas are built at crossing of NH-44 on north and south side respectively.
3. **SH-163** – This connects Hyderabad to Warangal. Ghatshekar toll plaza and interchange is constructed at crossing of SH-163 with ORR
4. **Karimnagar Road** – This road connects city of Karmnagar and Siddipet to Hyderabad. Shamirpet Toll plaza and interchange are entry and exit point for this road.
5. **NH- 765** – It's a new national highway connects Hyderabad to Tokapelle. This highway crosses from very near to Airport. There are some residential and commercial projects coming up on either side of this road in influence zone area of Hyderabad Airport.

2.2 Project Appreciation

Nehru Outer Ring Road of Hyderabad was built in phases and the complete ring was thrown open to public in year 2016. ORR is 8 lane expressway kind of specification. Pavement is flexible except that at toll plazas where rigid pavement is provided. Condition of pavement is good in general in entire stretch of 158 Km. ORR is fully access controlled road. There is no leakage point and entry / exit can happen from toll plaza location only. Safety items like crash barriers, lighting, delineators, signage and markings etc are well placed and are in good condition. Following photographs show general condition of road.



ORR has 19 locations at which currently toll is in operation. Toll plaza configuration and arrangement of movement is not same at all such locations. Depending on availability of land and other constraints. Following table presents location of toll plaza and type of interchange at such locations.

Table 2-1: Details of Toll plazas locations

Hyderabad Ring Road				
Sr. No	**Name of Interchange**	**Chainage in Km**	**Type of Interchange**	**Number of Toll booths**
1	Kokapet	2+000	Rotary	4
1A	Neopolis	3+700	Single Trumpet (Under Construction)	
2	Idulnagalapalli	13+900	Rotary	4
3	Patancheru	22+500	Double Trumpet	1
4	Sultanpur	31+000	Rotary	4
4A	Mallampet	37+000	Double Trumpet (Under Construction)	
5	Saragudem	42+700	Double Trumpet	1

Hyderabad Ring Road				
Sr. No	**Name of Interchange**	**Chainage in Km**	**Type of Interchange**	**Number of Toll booths**
6	Medchal	52+200	Double Trumpet	1
7	Shamirpet	61+100	Double Trumpet	1
8	Keesara	73+000	Rotary	4
9	Ghatkesar	81+550	Double Trumpet	1
10	Taramatipet	89+750	Rotary	4
11	Pedda Amberpet	96+650	Double Trumpet	1
12	Bongloor	108+900	Double Trumpet	1
13	Ravirayal	116+000	Diamond	4
14	Tukkuguda	121+500	Diamond	4
15	Pedda Golconda	129+750	Rotary	4
16	Shamshabad	136+100	Partial Clover Leaf with directional Ramps	4
17	Rajandranagar-1&2	142+620	Rotary	2
18	TSPA	147+650	Diamond	4
18A	Narsingi (One Entry + One Exit Ramp	152+000	(Under Construction)	
19	Nanakramguda	154+350	Toll Plaza	1

Configuration and movement pattern of above types of toll plaza is shown in following figures.

1. **Rotary Type interchange – with 4 toll booths**

Kokapet, Idulnagalpalli, Sultanpur, Keesara, Taramatipet, Shamsabad, have such type of arrangement. Following image shows typical location (Kokapet) of toll booths and movement pattern for such type of arrangements. All above locations have similar arrangements.

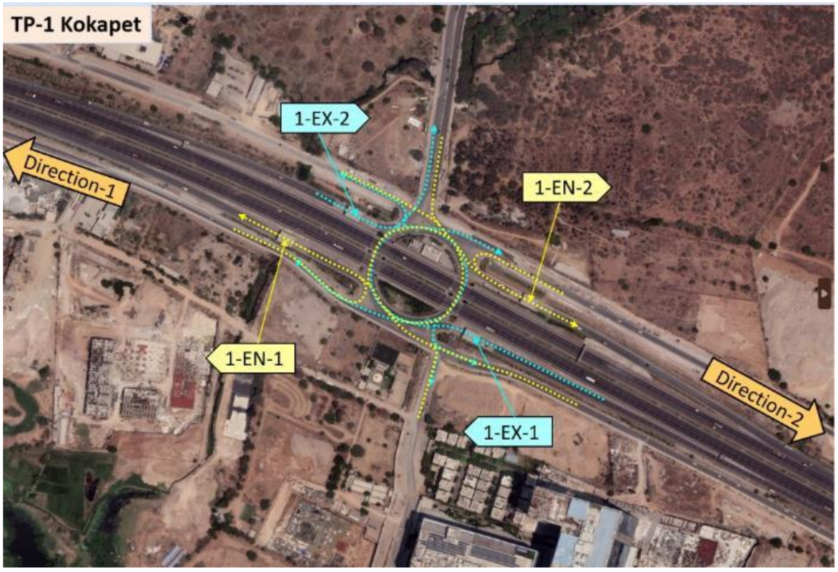


Figure 2-5 : Rotary Type Interchange with 4 toll booths.

2. **Diamond Type interchange – with 4 toll booths**

Ravirayal, Tukkuguda and TSPA have diamond type interchange with four booth arrangement. Following image shows the general arrangement and movement pattern.

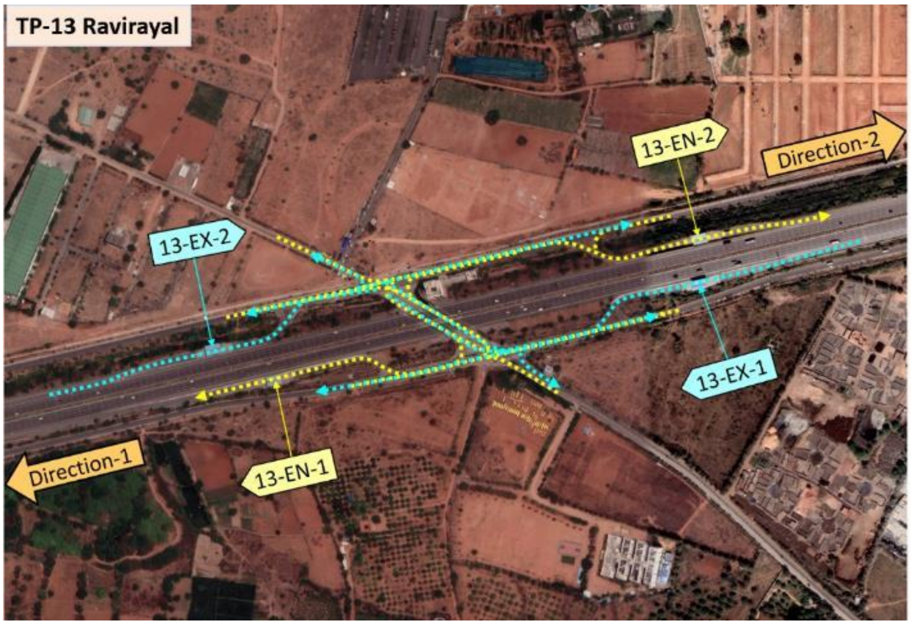


Figure 2-6 : Diamond Type Interchange with 4 toll booths.

3. **Double Trumpet Type Interchange with Single Toll Plaza**

Patancheru, Saragudam, Medchal, Shamirpet, Ghatkesar, Pedda Amberpet, Bongolor and Nanakramguda locations have double trumpet interchange in which all the movements are brough to one location for toll payment.

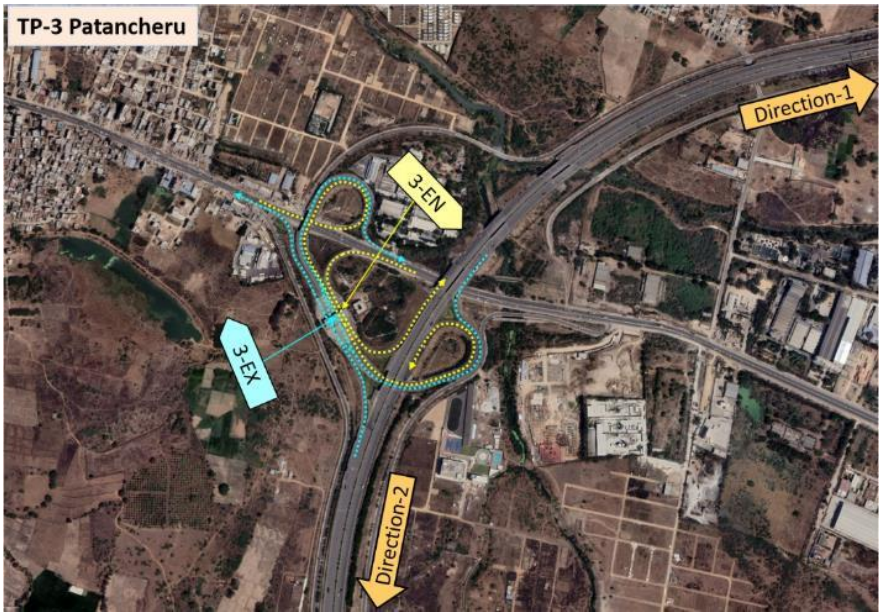


Figure 2-7 : Double Trumpet Type Interchange

4. **Partial Cloverleaf with directional ramps**

Shamshabad interchange is partial cloverleaf type with directional ramps. It also has four tool booths.

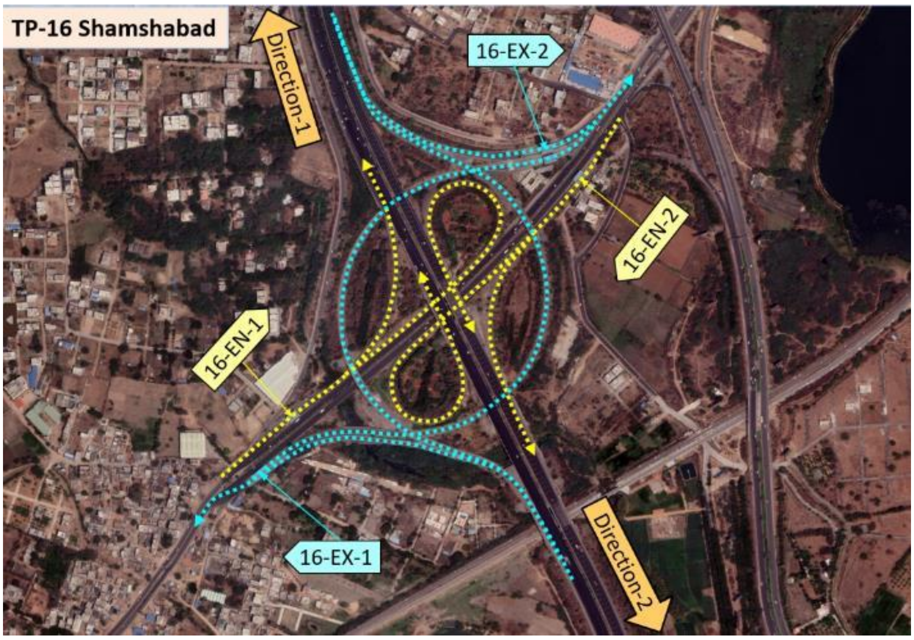


Figure 2-8 : Shamashabad Interchange and Ramps

5. **Single Toll Plaza at Nanakramguda**

Nanakram Guda has special arrangement. At this location all movement which enter or exit at this location are brough to one side road on which toll plaza is constructed.

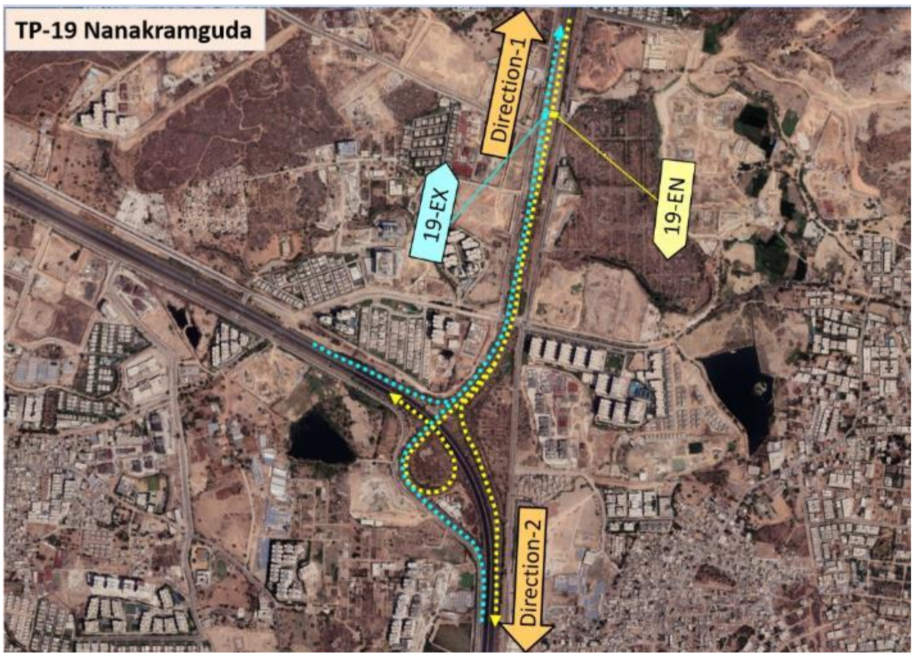


Figure 2-9 : Toll Plaza Nanakramguda and movements.

In addition to above 19 toll plaza locations two are under construction at following locations.

- Neopolis- Single Trumpet
- Narsingi – One Entry and one Exit Ramp

2.3 Project Corridor Illustration

The following photographs illustrate the project section along the corridor.

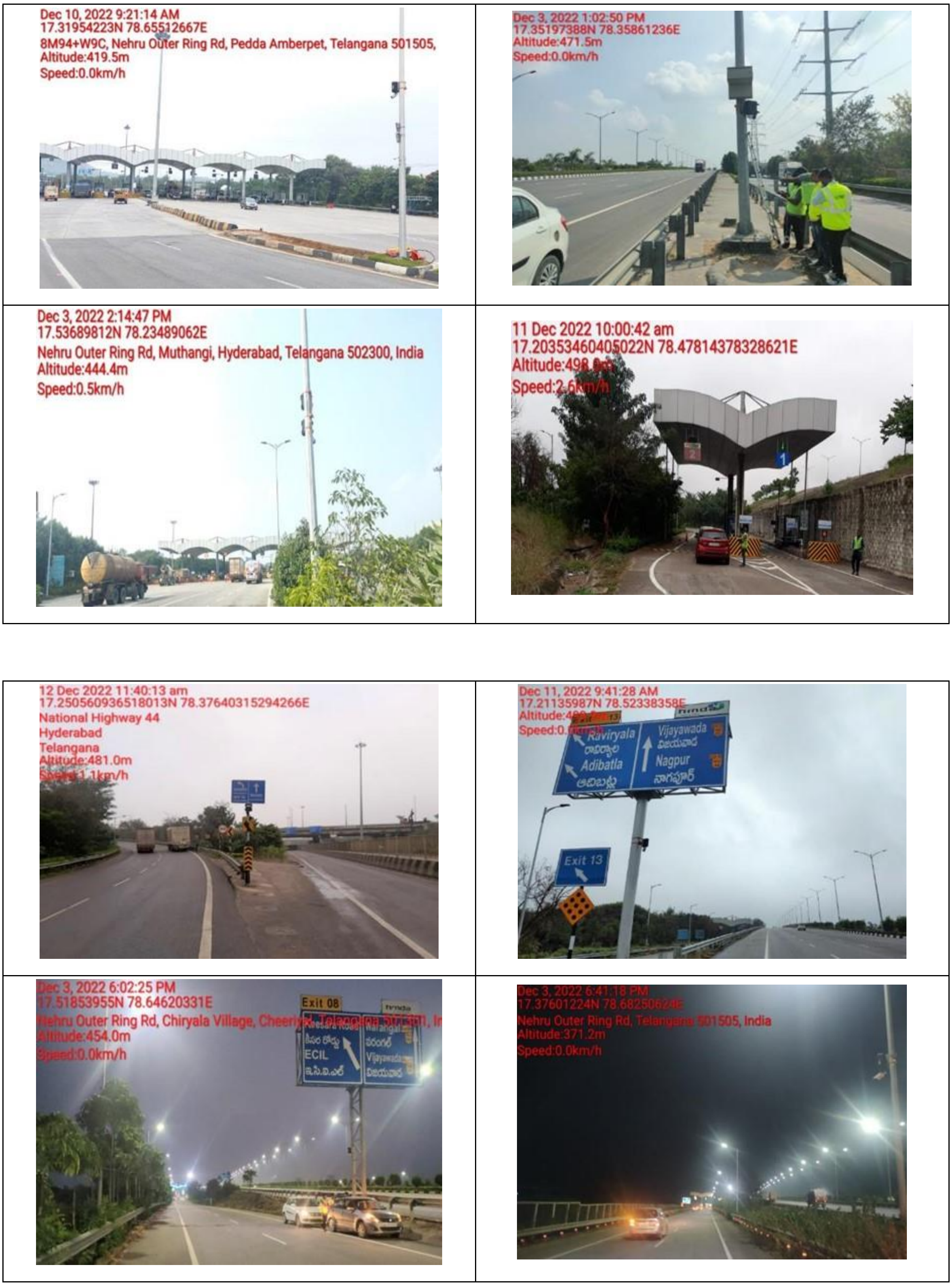


Figure 2-10 : Photographs showing Project Corrido

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have carried out a reconnaissance survey of the project corridor to understand the general traffic and travel characteristics on the corridor.

Traffic data forecast is one of the important inputs required for a TOT/BOT/DBFO highway/roadway project. In order to arrive at a fair estimate of traffic forecast it is necessary to collect data, analyse, model, validate and then forecast. The Consultants have carried out a reconnaissance survey of the project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic studies have been carried out for the project.

- Classified traffic volume counts at toll plaza location on 8-lanes ring road expressway encircling Hyderabad, traffic data from August 2023 to November 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. No	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 158.000 22 Toll Plaza Neharu Outer	AADT for Four months from August	For Four months from August	For Four months	For Four months	For Four months

SR. No	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
	Ring Road at Hyderabad	2023 to November2023	2023 to November2023	from August 2023 to November 2023	from August 2023 to November 2023	from August 2023 to November 2023

3.2 Classified Traffic Volume

The objective of conducting Classified Traffic Volume Count is to understand the traffic flow pattern on a roadway. The Classified Traffic Volume has been provided by the concessionaire of project road actual traffic data gathered at toll plaza locations.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in the table below.

Table 3-2 : Vehicles classification system

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer, Two-Wheeler, Three-Wheeler

Source - IRC: 64 – 1990

However, since project highway is currently under toll operation, the data collected corresponds to category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Truck / Bus
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data from August 2023 to November 2023.

Since the traffic data available for this update is for only four months, from August 2023 to November 2023, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current four months to arrive at Annual Average Daily Traffic of base year 2023-24. Same corrected traffic is used for future projections and revenue calculations. The following table shows historical traffic on project stretch and Annual Average Daily Traffic (AADT) for year 2023-24. Traffic volume for all toll plaza pairs is given in the table below.

Following tables show base traffic matrix of each category of vehicles for each pair of traffic Base year 2023-24

Table 3-3 : Tollable Annual Average Daily Traffic (AADT) Matrix for Car/Jeep/Van

SINGLE JOURNEY

CLASS – 01

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	352	692	100	48	141	243	219	35	80	14	243	173	89	137	56	1592	710	669	2	1905
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	293	0	0	557	84	49	150	336	164	47	69	4	61	36	14	37	94	224	140	139	0	546
3	590	0	407	0	356	183	637	568	503	192	263	34	233	117	29	153	25	1279	1172	566	91	1380
4	166	0	110	452	0	70	348	367	349	116	225	24	163	19	6	29	9	170	61	61	0	719
4A	109	0	64	304	71	0	115	200	312	80	172	14	153	16	3	15	6	101	18	31	0	91
5	297	0	123	732	268	77	0	608	1043	271	633	65	612	75	8	38	13	239	58	71	0	125
6	268	0	256	672	321	165	582	0	551	262	550	116	571	125	16	112	29	520	100	125	0	285
7	223	0	155	640	286	234	848	464	0	237	609	164	443	129	18	300	91	137	42	100	1	258
8	47	0	45	216	106	58	248	297	315	0	267	86	355	90	16	185	73	51	5	27	4	51
9	72	0	67	264	203	136	709	525	713	334	0	247	864	258	46	492	230	176	28	159	75	328
10	12	0	3	45	25	15	82	149	252	125	461	0	86	45	9	43	28	17	3	17	8	39
11	202	0	68	227	145	138	604	534	482	350	953	91	0	222	64	591	239	287	42	256	209	1655
12	126	0	37	114	14	12	61	119	133	152	261	43	235	0	93	960	464	241	30	193	109	637
13	35	0	10	25	4	1	5	12	15	10	29	6	47	66	0	99	88	100	17	66	35	241
14	99	0	35	99	18	10	33	81	233	137	559	41	410	817	96	0	330	403	39	181	109	686
15	45	0	14	28	7	4	8	18	83	58	207	63	219	390	92	213	0	585	34	96	59	293
16	1050	0	181	540	107	60	187	372	141	55	213	24	628	303	136	485	452	0	194	1345	889	6744
17	709	0	163	1226	104	50	66	109	44	7	36	3	43	35	15	35	29	112	0	1355	429	1741
18	639	0	139	308	44	20	78	118	102	31	200	22	289	409	87	239	117	1742	1002	0	207	4068
18A	1	0	0	0	0	0	0	1	2	7	86	10	197	124	43	119	63	985	318	128	0	3
19	1419	0	557	1291	94	36	126	243	259	46	309	46	1501	687	241	1036	325	9334	1392	3820	4	1

Table 3-4 : Tollable Annual Average Daily Traffic (AADT) Matrix for Minibus/LCV

SINGLE JOURNEY

CLASS – 02

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	13	32	3	1	6	11	3	1	1	0	2	3	6	2	1	14	18	11	0	26
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	11	0	0	35	3	1	5	29	2	1	1	0	1	1	0	1	9	3	5	4	0	8
3	34	0	26	0	58	12	134	138	55	32	33	4	102	23	4	16	6	161	90	18	3	19
4	3	0	3	59	0	2	15	15	6	4	3	1	7	1	1	1	1	17	6	1	0	8
4A	1	0	1	14	1	0	5	12	7	2	2	1	5	1	0	1	0	4	1	1	0	0
5	9	0	6	171	21	4	0	70	54	20	29	4	50	12	1	6	2	62	14	5	0	3
6	13	0	12	160	20	12	65	0	35	37	56	9	146	24	3	33	6	177	32	9	0	9
7	4	0	2	56	7	8	33	21	0	12	36	8	57	15	2	19	25	13	4	7	0	2
8	1	0	1	32	6	3	23	41	19	0	8	3	15	4	1	5	8	5	0	1	0	0
9	1	0	1	30	3	2	30	48	35	12	0	28	70	19	2	18	36	17	0	3	1	1
10	0	0	0	6	1	1	4	14	12	5	14	0	3	2	0	3	3	1	0	1	1	1
11	3	0	2	89	7	4	53	146	60	16	68	4	0	17	3	39	56	33	2	10	5	10
12	3	0	1	18	1	1	7	21	18	10	17	1	24	0	2	35	50	14	1	10	4	12
13	2	0	0	3	0	0	0	2	1	0	1	0	2	1	0	2	8	2	1	2	1	13
14	2	0	1	16	2	1	5	23	20	3	30	2	37	28	2	0	29	17	1	8	3	12
15	0	0	1	4	0	0	1	3	16	4	22	3	42	31	5	16	0	8	1	2	1	5
16	17	0	4	101	16	2	51	161	19	5	20	3	58	20	3	18	11	0	7	31	20	132
17	28	0	5	77	9	2	14	27	3	0	1	0	3	2	0	2	2	6	0	45	18	33
18	7	0	3	9	1	0	4	8	4	1	3	1	9	17	3	8	3	29	35	0	4	49
18A	0	0	0	0	0	0	0	0	0	0	1	0	1	2	2	2	1	8	7	2	0	0
19	25	0	5	24	1	0	3	8	2	1	1	0	8	8	16	22	8	120	32	74	0	0

Table 3-5 : Tollable Annual Average Daily Traffic (AADT) Matrix for

***Bus/2-* Axle**

SINGLE JOURNEY

CLASS – 03

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	5	9	1	0	3	4	1	0	0	0	3	3	4	1	1	8	10	5	0	12
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	6	0	0	17	1	1	4	47	1	1	1	0	1	0	0	1	10	5	3	1	0	2
3	17	0	13	0	38	7	121	212	44	35	42	7	250	28	3	39	15	216	134	22	1	30
4	1	0	2	34	0	1	17	11	4	2	2	1	9	1	1	1	0	15	4	1	0	6
4A	0	0	0	8	1	0	5	7	4	1	2	0	7	1	0	0	0	2	2	1	0	0
5	5	0	4	119	20	4	0	70	41	16	23	2	73	6	0	4	2	58	6	3	0	1
6	5	0	7	241	15	9	69	0	21	54	57	7	289	19	3	44	12	517	14	9	0	4
7	1	0	1	72	3	3	21	25	0	11	20	3	45	9	1	14	20	17	2	1	0	1
8	0	0	1	36	3	1	18	61	16	0	11	4	15	2	1	3	7	6	0	0	0	0
9	0	0	1	45	3	2	33	55	25	11	0	19	81	26	2	22	47	19	0	7	1	1
10	0	0	0	6	1	1	4	10	5	5	16	0	12	5	1	2	3	1	0	2	0	1
11	3	0	2	220	7	6	72	301	47	22	71	4	0	20	5	58	70	53	3	10	3	11
12	2	0	1	26	1	1	5	15	9	9	15	2	23	0	1	20	35	13	3	6	1	8
13	2	0	0	3	0	0	0	2	1	0	2	0	3	1	0	2	7	5	2	5	1	11
14	1	0	2	36	1	0	4	29	9	3	26	1	51	24	2	0	13	16	1	4	2	4
15	0	0	0	12	0	0	1	5	18	4	26	3	43	25	8	11	0	16	3	5	1	2
16	9	0	5	177	10	1	47	489	26	9	20	2	96	18	4	19	16	0	9	20	8	166
17	6	0	3	66	6	2	7	14	2	0	1	0	4	3	1	2	4	8	0	22	6	17
18	3	0	1	7	1	0	2	5	1	1	3	1	10	13	5	6	4	19	20	0	1	14
18A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	1	6	6	1	0	0
19	7	0	1	10	1	0	1	3	1	0	1	0	9	10	18	16	2	152	19	16	0	0

Table 3-6 : Tollable Annual Average Daily Traffic (AADT) Matrix for

3 - Axle

SINGLE JOURNEY

CLASS – 04

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	54	34	4	0	1	1	0	0	0	0	2	1	2	2	3	18	22	38	0	18
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	29	0	0	127	10	0	2	29	1	0	0	0	0	0	0	0	5	1	2	10	0	8
3	72	0	243	0	43	3	84	116	32	21	30	5	134	15	1	11	5	115	76	8	1	20
4	14	0	18	35	0	1	9	7	3	3	2	0	4	0	0	1	0	6	1	1	0	4
4A	0	0	1	5	0	0	2	5	1	1	2	1	2	0	0	0	0	2	1	0	0	0
5	3	0	6	82	17	2	0	45	22	9	11	3	27	1	0	1	1	23	3	1	0	0
6	1	0	4	100	11	7	54	0	13	27	39	3	185	9	2	8	5	367	24	2	0	0
7	0	0	1	56	3	1	39	13	0	5	10	3	23	6	1	5	16	6	1	1	0	0
8	0	0	0	20	4	1	11	34	5	0	11	4	8	2	0	1	2	3	0	0	0	0
9	0	0	1	33	2	1	19	32	11	5	0	8	40	10	1	12	19	22	0	3	0	1
10	1	0	0	6	0	0	2	6	3	3	9	0	8	6	2	5	2	1	0	3	0	1
11	2	0	1	146	2	2	25	184	26	9	49	11	0	13	6	26	35	32	2	6	1	2
12	1	0	0	16	0	0	1	11	3	4	9	2	12	0	2	8	14	8	0	2	0	0
13	1	0	1	1	0	0	0	1	0	0	1	1	2	9	0	5	4	3	1	4	4	2
14	2	0	0	13	1	1	1	7	4	1	17	2	16	13	3	0	7	17	7	5	2	3
15	1	0	1	5	0	0	0	2	3	1	6	2	16	9	2	3	0	9	3	3	1	0
16	7	0	2	85	6	1	25	350	8	6	15	1	66	10	2	18	7	0	9	15	11	38
17	17	0	3	43	5	1	5	11	1	0	0	0	2	1	0	5	3	5	0	51	25	51
18	19	0	3	3	1	0	1	1	0	0	2	0	4	7	2	5	4	15	29	0	5	9
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	1	7	9	1	0	0
19	17	0	5	8	2	0	0	0	0	0	0	0	1	0	2	7	1	11	39	11	0	0

Table 3-7 : Tollable Annual Average Daily Traffic (AADT) Matrix for

4 to 6 - Axle

SINGLE JOURNEY

CLASS – 05

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	11	46	3	0	3	6	7	0	2	1	20	4	3	4	2	30	7	15	0	8
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	0	0	60	5	0	4	53	9	0	2	0	11	1	0	1	17	17	1	2	0	1
3	69	0	96	0	77	6	169	186	116	42	75	15	552	56	3	32	11	294	90	18	3	27
4	16	0	15	43	0	1	12	11	19	2	5	0	15	1	0	1	1	15	1	1	0	5
4A	0	0	0	6	1	0	7	4	10	1	3	0	4	0	0	0	0	2	0	0	0	0
5	6	0	3	125	7	5	0	45	77	10	22	2	82	10	0	3	2	64	2	2	0	0
6	14	0	12	169	9	5	59	0	21	21	79	4	193	17	1	11	11	560	6	8	0	1
7	7	0	11	168	19	19	101	17	0	26	44	5	48	15	2	9	61	72	4	5	0	3
8	1	0	1	24	2	0	10	20	18	0	8	2	17	2	0	1	5	5	0	0	0	0
9	1	0	4	72	6	5	52	60	44	6	0	12	184	20	8	34	72	38	2	15	1	1
10	7	0	0	9	1	0	3	7	13	4	14	0	62	23	5	8	3	7	10	18	3	6
11	32	0	14	453	21	7	120	261	71	23	200	14	0	49	39	68	105	121	19	52	16	25
12	4	0	1	91	1	0	6	15	12	8	17	6	27	0	1	14	32	16	2	7	1	1
13	0	0	0	4	0	0	0	1	1	0	3	2	11	1	0	1	4	3	0	2	0	0
14	17	0	1	23	0	0	2	9	6	1	58	2	46	14	3	0	11	17	27	9	3	9
15	1	0	1	6	0	0	1	2	11	2	36	5	38	20	2	5	0	6	0	2	0	1
16	41	0	26	212	18	1	69	656	83	7	55	4	182	35	6	20	9	0	16	31	16	72
17	8	0	2	27	6	2	3	5	5	0	2	3	10	3	1	7	2	9	0	55	11	14
18	16	0	4	8	1	0	2	4	6	1	14	5	46	30	3	11	2	24	57	0	4	39
18A	0	0	0	0	0	0	0	0	0	0	2	0	4	1	0	6	1	5	6	1	0	0
19	4	0	1	10	0	0	2	2	3	0	2	1	9	2	0	13	1	32	7	20	0	0

Table 3-8 : Tollable Annual Average Daily Traffic (AADT) Matrix for

7 & Above - Axle

SINGLE JOURNEY

CLASS – 06

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 3-9 : Tollable Annual Average Daily Traffic (AADT) Matrix for Car/Jeep/Van

RETURN JOURNEY
CLASS – 01

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	70	160	57	48	40	65	42	14	14	2	19	39	6	18	4	182	275	276	0	461
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	128	0	0	94	27	20	31	50	28	11	11	0	8	8	1	5	1	23	43	42	0	194
3	175	0	233	0	162	126	289	237	118	78	77	12	32	33	4	13	2	89	419	92	0	423
4	28	0	24	74	0	23	85	78	45	30	31	5	12	1	0	1	0	11	13	10	0	30
4A	8	0	11	32	14	0	17	29	35	12	17	2	9	1	0	0	0	4	2	2	0	5
5	46	0	57	165	134	29	0	178	214	85	142	22	76	11	0	5	1	33	17	22	0	40
6	57	0	51	137	121	63	215	0	97	102	145	43	116	30	1	12	2	54	26	26	0	58
7	56	0	54	87	119	104	397	188	0	100	212	88	126	34	1	25	24	10	7	23	0	59
8	6	0	11	40	33	24	85	66	47	0	107	43	70	20	1	12	9	4	1	5	1	8
9	11	0	21	70	73	48	218	172	167	66	0	169	300	79	3	48	60	33	5	49	20	67
10	1	0	0	5	5	2	12	19	26	21	53	0	14	10	1	4	3	4	0	3	1	5
11	26	0	8	44	26	21	105	124	98	87	254	12	0	43	6	54	66	37	5	44	29	194
12	26	0	7	20	3	3	17	33	30	29	80	10	31	0	8	181	84	57	5	51	31	170
13	14	0	4	8	2	1	2	5	5	6	16	1	16	28	0	24	31	37	3	30	16	108
14	37	0	9	28	6	3	7	22	74	52	190	9	192	370	16	0	46	139	7	70	40	353
15	14	0	3	5	2	1	2	3	13	16	44	6	41	138	12	68	0	130	7	35	21	134
16	418	0	58	275	34	22	52	131	18	9	28	2	43	58	13	88	159	0	14	554	293	3743
17	121	0	29	248	8	3	9	14	4	1	3	0	3	4	1	3	2	16	0	224	71	285
18	169	0	35	61	13	8	14	27	14	6	30	3	34	58	10	34	11	305	418	0	12	1588
18A	0	0	0	0	0	0	0	0	0	0	7	1	14	17	4	12	6	97	70	13	0	0
19	561	0	174	370	42	33	27	55	37	10	61	5	175	186	55	147	26	1574	528	1776	0	0

Table 3-10 : Tollable Annual Average Daily Traffic (AADT) Matrix for Minibus/LCV

RETURN JOURNEY

CLASS – 02

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	6	16	0	0	2	5	2	0	0	0	1	0	0	0	0	5	18	2	0	9
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	6	0	0	11	1	0	2	5	0	0	0	0	0	0	0	0	0	1	1	0	0	1
3	11	0	16	0	24	4	62	53	10	10	5	1	16	7	1	4	1	29	26	2	0	7
4	0	0	0	25	0	0	8	6	2	3	1	0	1	0	0	0	0	5	1	0	0	0
4A	0	0	0	2	0	0	1	2	2	2	0	0	1	0	0	0	0	0	0	0	0	0
5	1	0	0	42	3	0	0	19	9	7	4	1	12	2	0	1	0	10	4	0	0	0
6	1	0	2	48	2	3	23	0	3	14	9	3	35	6	0	8	0	31	8	1	0	1
7	1	0	0	19	2	3	29	16	0	8	11	4	17	6	0	8	4	2	0	1	0	0
8	0	0	0	9	0	1	6	12	2	0	3	1	3	1	0	1	1	1	0	0	0	0
9	0	0	0	13	0	1	14	23	12	1	0	3	23	7	0	6	7	3	0	1	0	0
10	0	0	0	1	0	0	1	3	2	1	4	0	1	0	0	0	0	0	0	0	0	0
11	0	0	0	17	1	1	10	27	16	2	14	1	0	4	0	7	9	5	0	1	0	1
12	1	0	0	8	0	0	4	8	6	1	6	0	2	0	0	8	9	2	0	2	0	2
13	2	0	0	2	1	0	0	1	0	0	1	0	1	0	0	0	1	0	0	1	1	10
14	0	0	0	7	0	0	2	9	4	2	6	1	10	14	0	0	3	6	0	3	1	7
15	0	0	0	1	0	0	0	0	4	2	7	0	14	15	2	6	0	2	0	0	0	2
16	3	0	1	34	2	0	14	23	1	0	1	0	9	2	0	5	1	0	1	8	2	44
17	2	0	1	28	1	0	4	10	1	0	0	0	0	0	0	0	0	1	0	5	1	6
18	4	0	2	4	0	0	1	3	2	0	1	0	3	4	0	3	0	7	15	0	0	39
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0
19	5	0	4	4	0	0	1	3	0	0	0	1	1	2	4	3	1	38	9	11	0	0

Table 3-11 : Tollable Annual Average Daily Traffic (AADT) Matrix for

***Bus/2-* Axle**

RETURN JOURNEY

CLASS – 03

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	4	3	1	0	1	2	0	0	0	0	0	0	0	0	0	4	3	1	0	1
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1	0	0	3	1	0	1	3	0	0	0	0	0	0	0	1	0	1	1	0	0	0
3	1	0	3	0	9	1	24	39	6	14	8	2	15	5	1	2	1	27	10	1	0	2
4	0	0	0	14	0	0	10	4	1	2	1	0	1	0	0	0	0	2	0	0	0	0
4A	0	0	0	2	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
5	0	0	1	37	5	1	0	17	6	8	7	1	17	1	0	1	0	10	1	0	0	0
6	0	0	1	52	1	2	15	0	6	31	18	3	35	4	0	2	0	27	1	1	0	0
7	0	0	0	12	1	2	27	10	0	8	11	2	6	3	0	2	4	2	0	0	0	1
8	0	0	0	8	0	0	5	23	3	0	2	1	4	0	0	1	1	1	0	0	0	0
9	0	0	1	11	0	1	11	22	6	2	0	4	28	7	0	5	12	2	0	1	0	0
10	0	0	0	1	0	0	0	2	1	1	4	0	1	1	0	0	1	0	0	0	0	0
11	0	0	0	13	1	1	6	32	8	2	37	2	0	2	0	6	10	4	0	1	0	1
12	0	0	0	4	0	0	2	5	2	0	12	2	4	0	0	8	8	2	1	1	0	3
13	1	0	0	1	0	0	0	1	1	0	1	0	1	0	0	1	4	2	0	2	0	9
14	0	0	0	14	1	0	1	10	4	1	10	1	16	5	0	0	3	4	0	1	0	2
15	0	0	0	1	0	0	0	1	2	1	14	1	11	10	2	2	0	1	0	0	0	0
16	1	0	2	30	1	0	7	28	1	0	1	0	4	1	1	2	2	0	0	5	1	84
17	1	0	1	19	0	0	1	2	0	0	0	0	1	0	0	0	0	1	0	3	1	1
18	1	0	0	4	0	0	1	5	0	0	3	1	2	1	1	1	1	6	5	0	0	8
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
19	4	0	1	3	0	0	0	2	0	0	0	0	2	1	3	1	0	95	2	4	0	0

Table 3-12 : Tollable Annual Average Daily Traffic (AADT) Matrix for

3- Axle

RETURN JOURNEY

CLASS – 04

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	19	48	7	0	1	0	0	0	0	1	0	1	0	1	1	3	8	10	0	8
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	42	0	0	180	11	0	3	1	0	0	0	0	0	0	0	0	0	1	1	1	0	2
3	15	0	65	0	10	0	21	12	7	9	6	0	7	6	0	1	0	12	4	0	0	2
4	1	0	4	25	0	0	10	4	1	2	1	0	0	0	0	0	0	2	1	0	0	0
4A	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	31	2	0	0	20	13	3	4	1	2	0	0	0	0	3	1	0	0	0
6	0	0	0	28	1	1	13	0	3	17	9	2	12	1	0	0	0	11	0	0	0	0
7	0	0	0	9	0	0	10	4	0	2	3	1	2	0	0	2	0	0	0	0	0	0
8	0	0	0	5	1	0	3	11	1	0	1	1	2	0	0	0	0	0	0	0	0	0
9	0	0	0	10	0	0	2	7	2	4	0	4	21	2	0	5	2	2	0	1	0	0
10	0	0	0	2	0	0	1	1	1	1	3	0	8	1	0	1	0	0	0	0	0	0
11	0	0	0	4	0	0	2	8	4	1	18	2	0	3	0	3	2	2	0	0	0	0
12	0	0	0	1	0	0	0	2	2	1	5	2	3	0	7	8	2	1	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	2	0	0	0	1	1	1
14	0	0	0	4	0	0	0	1	0	0	7	3	9	3	3	0	1	4	2	1	0	0
15	1	0	0	1	0	0	0	0	2	0	5	0	5	3	1	2	0	1	2	1	1	0
16	8	0	0	15	1	0	3	7	0	0	1	0	3	1	1	7	3	0	1	6	3	1
17	9	0	1	9	0	0	0	1	0	0	0	0	0	0	0	4	0	1	0	5	3	17
18	20	0	8	3	0	0	1	0	0	0	1	0	1	1	1	2	1	7	11	0	0	4
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	4	6	0	0	0
19	7	0	5	6	1	0	0	0	0	0	0	0	0	0	1	1	0	11	28	4	0	0

Table 3-13 : Tollable Annual Average Daily Traffic (AADT) Matrix for

4 to 6 - Axle

RETURN JOURNEY

CLASS – 05

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	0	47	9	0	0	5	3	0	0	5	14	2	0	14	0	15	4	5	0	1
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1	0	0	68	9	0	1	4	5	0	1	0	5	0	0	0	0	8	1	1	0	0
3	11	0	18	0	3	0	11	19	17	3	6	3	31	3	1	2	1	35	2	1	0	3
4	1	0	1	36	0	0	2	2	8	1	2	0	6	0	0	0	0	4	0	0	0	0
4A	0	0	0	2	0	0	3	1	6	0	1	0	1	0	0	0	0	0	0	0	0	0
5	0	0	0	57	1	3	0	17	43	3	12	1	28	1	0	0	0	13	0	0	0	0
6	1	0	3	44	0	1	11	0	4	5	5	3	39	1	0	0	0	15	0	0	0	0
7	0	0	0	17	3	4	27	1	0	6	6	3	16	1	0	0	1	2	0	0	0	0
8	0	0	0	8	0	0	3	4	9	0	1	1	5	0	0	0	0	0	0	0	0	0
9	0	0	0	17	0	1	2	6	9	2	0	3	55	4	0	19	13	6	0	1	1	0
10	0	0	0	3	0	0	1	0	3	0	5	0	6	3	1	0	0	0	2	3	0	0
11	0	0	0	18	0	0	3	6	6	2	37	8	0	1	4	3	3	6	0	2	0	0
12	0	0	0	3	0	0	1	1	2	1	6	11	15	0	0	1	2	2	1	1	0	0
13	0	0	0	0	0	0	0	0	1	0	5	2	21	0	0	2	0	0	0	0	0	0
14	1	0	0	5	0	0	0	1	3	0	21	3	29	2	0	0	2	4	3	2	1	0
15	0	0	1	2	0	0	0	1	1	1	11	1	17	3	1	2	0	2	0	0	0	0
16	4	0	1	23	0	0	4	8	3	0	1	2	22	1	0	3	1	0	1	4	0	3
17	1	0	0	12	0	0	0	0	2	0	1	4	10	0	0	22	0	2	0	11	2	1
18	2	0	0	2	0	0	0	0	2	0	1	3	12	1	0	2	0	8	8	0	0	6
18A	0	0	0	0	0	0	0	0	0	0	1	1	4	0	0	2	0	3	2	0	0	0
19	5	0	0	9	0	0	0	0	1	0	0	3	9	0	0	2	0	19	4	15	0	0

Table 3-14 : Tollable Annual Average Daily Traffic (AADT) Matrix for

7 & Above - Axle

RETURN JOURNEY

CLASS – 06

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3.4 Traffic Characteristic

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table 3-1515.***

Table 3-15 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-16 : Traffic in PCU at Project Stretch Base Year 2023-24

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2023-24	Hyderabad ORR At all TP	205075	283848	1.38

It can be observed from above that project traffic has PCU index less than 1.5 which is an indicator of high proportion of Passenger traffic.

3.4.2 Components of Traffic

As discussed previously, components of total traffic volume play an important role in determining project revenue. Modal spit of total traffic on project corridor is given in table below.

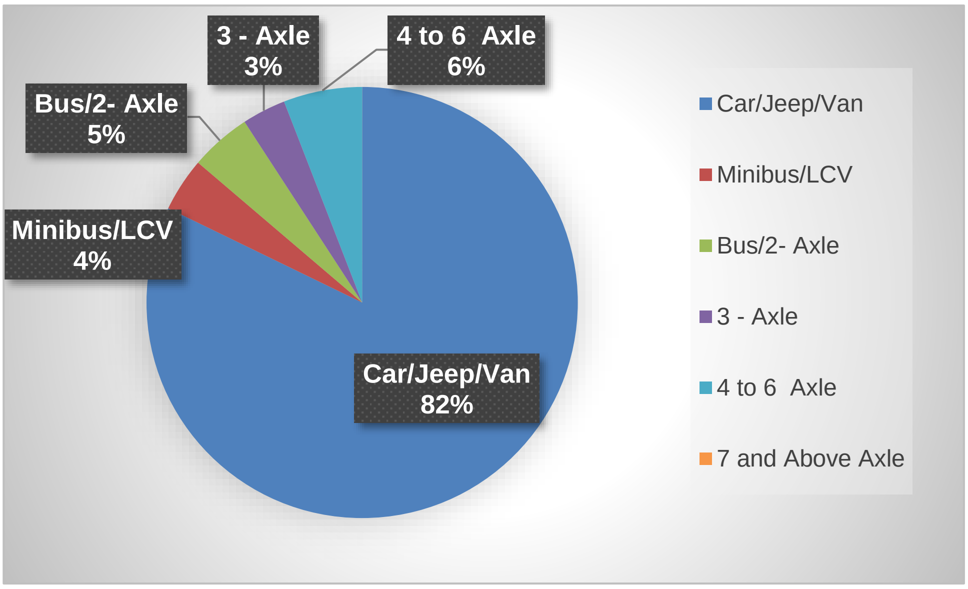


Figure 3-1 : Model Split of Tollable Vehicle

It is observed that car traffic forms about 82% of total traffic at toll plaza locations while multi axle commercial vehicles are about 9% of total traffic. Truck / Bus and LCV share about 5% and 3% of traffic volume respectively.

CHAPTER 4

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

4.1 Introduction

Traffic is generated and grows as a result of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. Further these factors have uncertainties associated with them. Forecasts of traffic have, therefore, to be dependent on the forecasts of factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a limited degree of accuracy and hence the forecasting of future traffic levels cannot be precise. The success of any road project with private sector participation hinges on the accuracy and robustness with which the future traffic and revenues are estimated.

Further, future traffic forms the basis of the design of the transportation infrastructure facility and also determines the viability of the project. The following section deals with different methods, techniques, and considerations used in traffic forecast for the project under study.

4.2 Secondary Data Collection

In addition to the above-mentioned traffic surveys, secondary data was also collected from the sources wherever the data available. This data is effectively used to determine and estimate past trends of growth and future pattern. Following secondary data was collected for study:

1. Vehicle registration data of Andhra Pradesh, Telangana, Karnataka and Maharashtra as these are the state which make most of the influence om traffic.
2. Data of Indian national GDP (Gross Domestic Product), NSDP (Net State Domestic Product) of Andhra Pradesh, Telangana, Karnataka and Maharashtra.
3. Estimated population data of Andhra Pradesh, Telangana, Karnataka and Maharashtra.

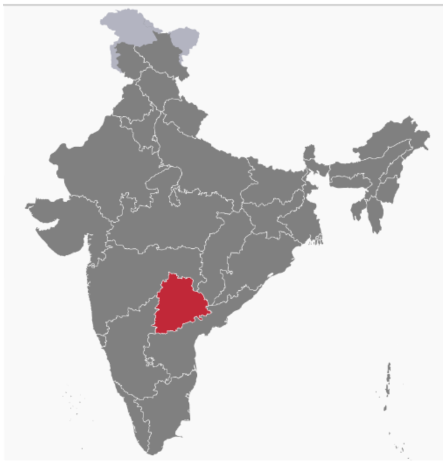
This data is utilized in the study to estimate the growth factors along the project corridor. Relevant part of secondary data is placed at Annexure.

4.3 Development in the Project Influence Area

The **Outer Ring Road**, officially as, **Jawaharlal Nehru Outer Ring Road** and abbreviated as, **O.R.R.**, is a 158 kilometer, 8-lanes ring road expressway encircling Hyderabad, capital of the Indian state of Telangana. The expressway is designed for speeds up to 100 km/h. A large part, 124 km (covering urban nodes viz., Hi- Tech city, Nanakramguda Financial District, Rajiv Gandhi International Airport, IKP Knowledge park, Hardware Park, Telangana State Police Academy, Singapore Financial District, and Games village) of the 158-km was opened by December 2012. Rest of the stretch was opened by 2016. Thus from 2016 onwards ORR is under operation and has contributed to great extent not only to ease out traffic flow but also has influenced the development of Hyderabad around ORR. Most of the development which are happening on periphery of Hyderabad take positioning with respect to NORR into account. It gives an easy connectivity between NH 44, NH 65, NH 161, NH 765 and NH 163 from Hyderabad to Vijayawada and Warangal as well as state highways leading to Vikarabad Nagarjuna Sagar and Karimnagar /Mancherial. The Outer Ring Road also helps in reducing the travel time from Rajiv Gandhi International Airport to cities like Nizamabad & Adilabad as it connects to NH44. The expressway is fenced, and 33 radial roads connect it with the Inner Ring Road.

Telangana State

Telangana is one of the fastest-growing states in India posing average annual growth rate of 13.90% over the last five years. Telangana's nominal gross state domestic product for the year 2020-21 stands at ₹12.05 lakh crore (US$170 billion).



Service sector is the largest contributor to the Telangana's economy with a share of about 65% in the year 2018-19. Growth in services has largely been fuelled by IT services with the State holding leading position in IT & ITeS in the country in terms of production and exports.

Traffic growth on NORR would be synonym with growth of Hyderabad. Hence various aspects of Growth of Hyderabad are relevant and discussed as under.

Hyderabad.

Hyderabad is among the top-10 fastest growing cities in the world, according to the World Economic Forum (WEF). Interestingly, all 10 of the fastest-growing cities in the world are in India. And, going by Gross Domestic Product (GDP) growth, this is likely to be the case till 2035, says research institute Oxford Economics. Hyderabad, with an 8.47% GDP growth, holds the second place among metropolitan cities in India.

By some estimates Hyderabad will be the second-fastest growing city in the world. It is just marginally behind Bengaluru, and should become number one (in India), since the projections are on a time-series trajectory, and Hyderabad’s actual growth has been geometrically exponential.

A city with rich history and magnificent olden structures is slowly became host to some of the most modern buildings, a blend of both the bygone kingdoms and the new corporate revolution. To boost Hyderabad’s development, the then Chief Minister of Andhra Pradesh Chandrababu Naidu successfully bid for the National Games in 2002 and the Afro Asian games in 2003, along with a strong bid to create a Formula One circuit in the state. These endeavours led to the development of efficient sports infrastructure in Hyderabad. The Indian School of Business (ISB) and IIT were also established in a similar endeavour to boost modern education.

The resulting urban agglomeration now has an area of over eight hundred square kilometres and consists of Hyderabad and other municipal entities surrounding it. The city population is expected to exceed one hundred and thirty-six lakhs in 2021.

As development picked up pace at the end of the nineties, the old city has declined, and the newer peripheral regions started to gain prominence. By 2001, the city was the sixth largest urban agglomeration in India; and during the last decade it registered a growth of 32%.

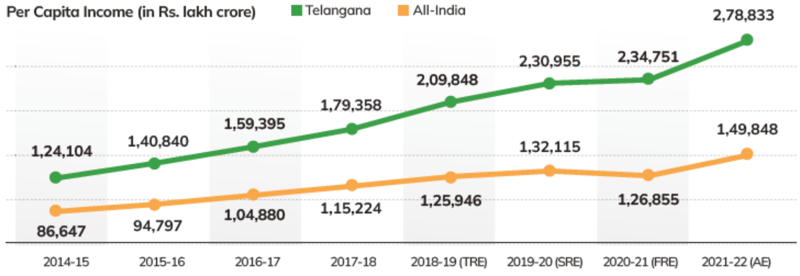
Developed land on the outskirts of Hyderabad has been utilised for large scale development just outside the Cybercity. The city itself is on its way to become the leader in e-governance. It has been predicted about Hyderabad that it would become a leading information-based society in the next two decades.

Rapid industrialisation has led to the increase in land prices while simultaneously driving the demand for infrastructure development. Commercial growth, therefore, has been concentrated in the Municipal Corporation of Hyderabad area while the metropolis has experienced pressure in residential growth. As workers prefer proximity to the workplace, their daily commute has resulted in the improvement of the road networks as well.

Growth of IT Sector

Ever since the 1990s, Andhra Pradesh had been promoting itself as a world class IT location and Hyderabad City, as a result, has managed to attract investment from companies such as IBM, Oracle, and Microsoft. The Hyderabad Technology Park has seen hundreds of IT companies registering themselves as soon as spaces are available. The objective of this elaborate promotional program has been to attract the right number of companies which together would form a critical mass for the city to develop as a high-tech city which would rub shoulders with Silicon Valley and Malaysia's Multimedia Super Corridor. During the nineties, several initiatives were taken up by the state government towards promotion of IT sector. These included setting up of IT training institutes, initiatives in e-governance, development of a Hi-Tech city and promoting the Software Technology Park as a preferred destination for private sector companies. Steps were then taken even further to allow the development of a Hardware Park, creation of a knowledge Park, and establishment of a financial district. The state government started tapping resources to invest in the biotechnology sector and, as a first step towards making the region specialized, a Biotech Park was introduced.

Per Capita Income at Current Prices for Telangana and India (2014-15 to 2021-22)



The result of these efforts can be seen in the form of various parks. One called Gnome Valley has been set up to focus on research and training in biomedicine for industrial production. Within this valley are also established the IKP Knowledge Park and Alexandria Knowledge Park with areas of two hundred acres and three hundred acres respectively. These parks cover Ameerpet, Medchal, Uppal, and a number of other parts of the Hyderabad Metropolitan region. The thrust areas of research here include vaccines, bioinformatics, seeds etc. Some of the biggest global pharmaceutical and research firms have setup their offices here. Similarly, a Hardware Park of one thousand seven hundred acres in area is also being developed.

The economic activities particularly related to manufacturing and associated activities, are concentrated in Ramachandrapuram, Patancheru, Balanagar, Uppal, Cherlapalli, Jeedimetla, and Moula Ali. These developments, on one hand, contributed to the economic growth of the city and, on the other hand, are responsible for the spatial growth, particularly the growth of the surrounding areas.

Development of Relevant Infrastructure

With expansion in infrastructure capabilities and progressive state policy framework, Hyderabad is not only providing strong impetus to its leading industries: IT/ITES, pharmaceuticals but also laying strong foundation for its growth sectors: aerospace, automotive and electric vehicle, textiles and emerging technologies. I strongly believe that the metropolis is on an ambitious journey to become one of the most diverse business hubs of the world by 2035.

The city's infrastructure is providing for evolving needs of massive commercial growth. Hyderabad's metro rail is India's second longest operational metro network after the Delhi Metro. In phase 1, 67 kilometers (kms) are operational of planned 72 kms. The route covers three major traffic corridors through 60 stations. The next phase aims to connect airport at Shamshabad with major economic zones of the greater Hyderabad region. Another groundwork capability worth mentioning is logistics parks. The Hyderabad Metropolitan Development Authority has developed 6 logistics parks in last 5 years and 8 more to come by 2025. The facilities are catering to over 340 logistics companies and 100 major manufacturing firms, making Hyderabad one of the largest logistics hubs of the country. In addition to the above, the metropolitan offers second cheapest office rentals amongst the major cities of India, adding to cost effectiveness of doing business in the city. In 2021, Hyderabad accounted for 36% country's share of office spaces.

It also holds the badge of most liveable city in the country for last five consecutive years as per Mercer's quality of living index. The city attracts talent pool from across the nation as well as from other world economies due to its notable social infrastructure: healthcare, education, housing, recreation, and personal freedom.

Telangana is a state known for its robust economic initiatives and trade friendly policies since its inception in 2014. A key example is state's TS I-pass industrial policy that is best in the country. It provides single window application clearance process capped at 15 days for all capital investment projects. This policy enabled Amazon to get clearance in just 11 days for its largest campus in the world to be built in Hyderabad. The state is poised to keep pace with technological advancements and thus first in India to launch actionable framework for AI and other emerging technologies. It has partnered with NASSCOM to formulate and execute the strategy. Telangana has taken many sectors specific initiatives that has improved ease of doing business and garnered foreign direct investments in the metro. Telangana's Electric vehicle and energy storage policy has aided Fiat Chrysler to set up global digital hub in Hyderabad. With availability of largest commercial land bank in the country, Telangana offers 1.45 lakhs acres of land to investors. This has enabled aerospace companies to set up production facilities in the city. Boeing and Safran have announced new manufacturing lines in Hyderabad. Airbus is setting up helicopter manufacturing plant in Shamshabad and committed to investment of INR 2500 Crores. The city ranked first in the Aerospace cities of the future in 2020-21.

The city's primary sectors, IT and pharma, continue to grow and bring in public and private investments. Google is investing INR 1000 Crores in its biggest facility outside US. This commercial space is set to be functional in Hyderabad by early 2023 and will be home to 13000 employees. The metro's Genome Valley is witnessing Biopharma scale-up facility, a public-private partnership between the state and Cytiva life sciences. The state is also developing 800-acre new pharma park in Rangareddy district.

Though Hyderabad faced the heat in 2020, the pandemic and subsequent lockdown compelled considerable layoffs in IT and SME sectors. Office space absorption rate declined, strongly indicating many firms shutting shops or reducing operations in the city. Few economic experts questioned Hyderabad's potential as a growing business hub. However, I find the argument short sighted and reactive. The city strongly stood the test of time, India's first ICMR approved RT-PCR kits and first indigenously developed vaccine for COVID-19 came from Hyderabad. In 2021, the city's economy started showing green shoots. It contributed to 30% of the pharmaceutical production of the country. It also gained momentum as the "Vaccine capital of the world" with 4 out of 5 leading vaccine manufacturers in India already present in Genome Valley. The same year, the city also had the highest net office absorption rate (of existing stock) at 20% and highest office completion rate in the country. It also witnessed lowest office space vacancies: 7.1% in comparison to its other metro counterparts.

Hyderabad's strong economic fundamentals with respect to infrastructure, social capital and economic policies, equip it to meet future challenges of global economies. It is poised for long-term growth and on a progressive path to become world's prominent commercial hub. With current GDP of $74 billion, it is projected to move forward with 8.47% CAGR and set to deliver as $201.4 billion economy by 2035.

IT INCUBATION CENTERS – HYDERABAD

Hyderabad has witnessed a very growth of IT incubation centers. Some are summarized below.

- Hyderabad is recognised as the leading IT hubs globally; the city houses more than 1500 IT and ITES companies.
- IT SEZs -53
- State contributes 11.6% of India's IT exports in 2019-20
- Accounts for 23.5% of India's IT export growth 2019-20
- T-HUB Phase-II, Hyderabad Built-up Area: 3.72 L sft; India's Largest start-up Incubator
- Plug & play facility in E city Built-up Area: 1.8 lakh sft with an integrated testing & training facility.
- T-Works, Hyderabad Built-up Area: 78,000 sft – Phase 1; India's largest prototyping facility
- Image Tower, Hyderabad Built-up Area: 460,000 sft A one of its kind plugs & Play Facility for Animation and Gaming companies. Expected completion: March 2023
- Incubation Centre, Warangal(U) Built-up Area: 15000 sft Plug & Play Facility for startups.

LIFE SCIENCES - HYDERABAD

Life Sciences sector continues to continue to consolidate the position of the State as one of the most important life sciences hubs in the world.

International Companies including **Sandoz Research and Development Laboratories**, **Chemo India Formulations**, **Jamp India Pharmaceutical**, **Ferring Laboratories** and **Tokyo Chemical Industr**y, among others have established their footprint in the State.

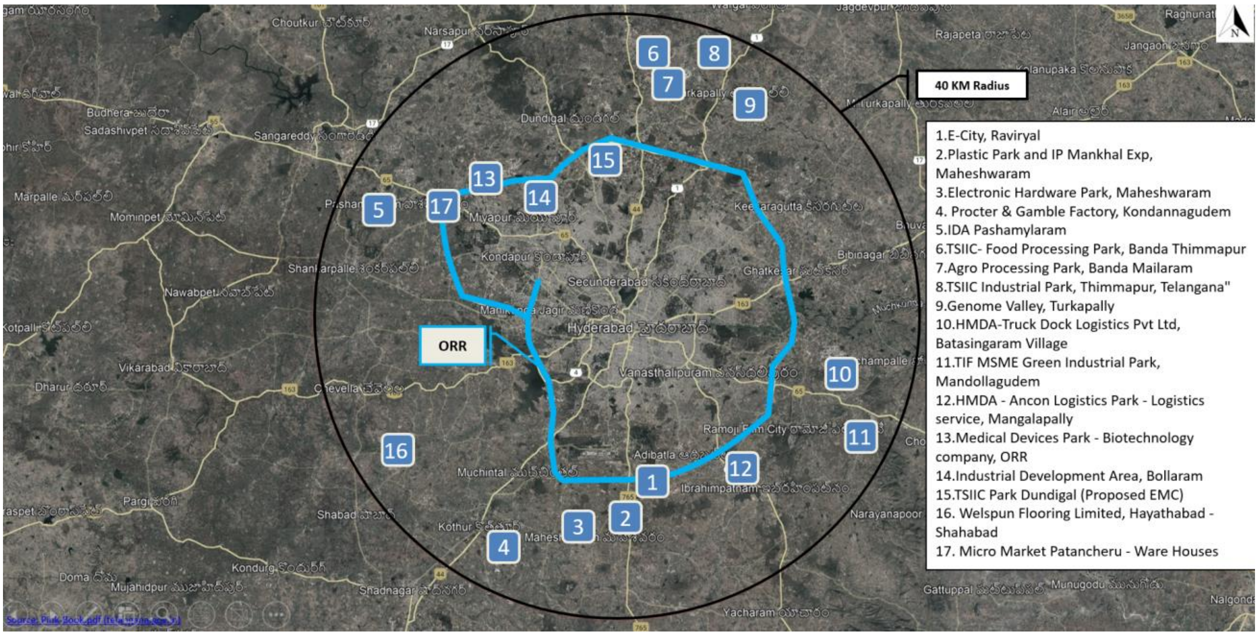
Telangana is the leading contributor of Pharma Exports from the Country since 2015-16 (28% share in FY 2020-21)

Hyderabad Pharma City: world's largest integrated pharma cluster spread over approx 19,333 acres. The cluster has been recognized as National Investment and Manufacturing Zone (NIMZ) by Government of India, given its national and international importance.

Genome Valley: Built over 1200 acres in three phases, more land is being added to the cluster along with more ready built labspace (more than 2 million square foot) Genome Valley houses more than 200 companies with a scientific workforce of about 15,000 professionals.

Medical Devices Park: Spread across 302 acres, 105 acres have already been allotted (more than 60 percent of the allottable land) to 40 companies. The park will house Asia's largest Stent manufacturing facility established by Sahajanand Medical Technologies

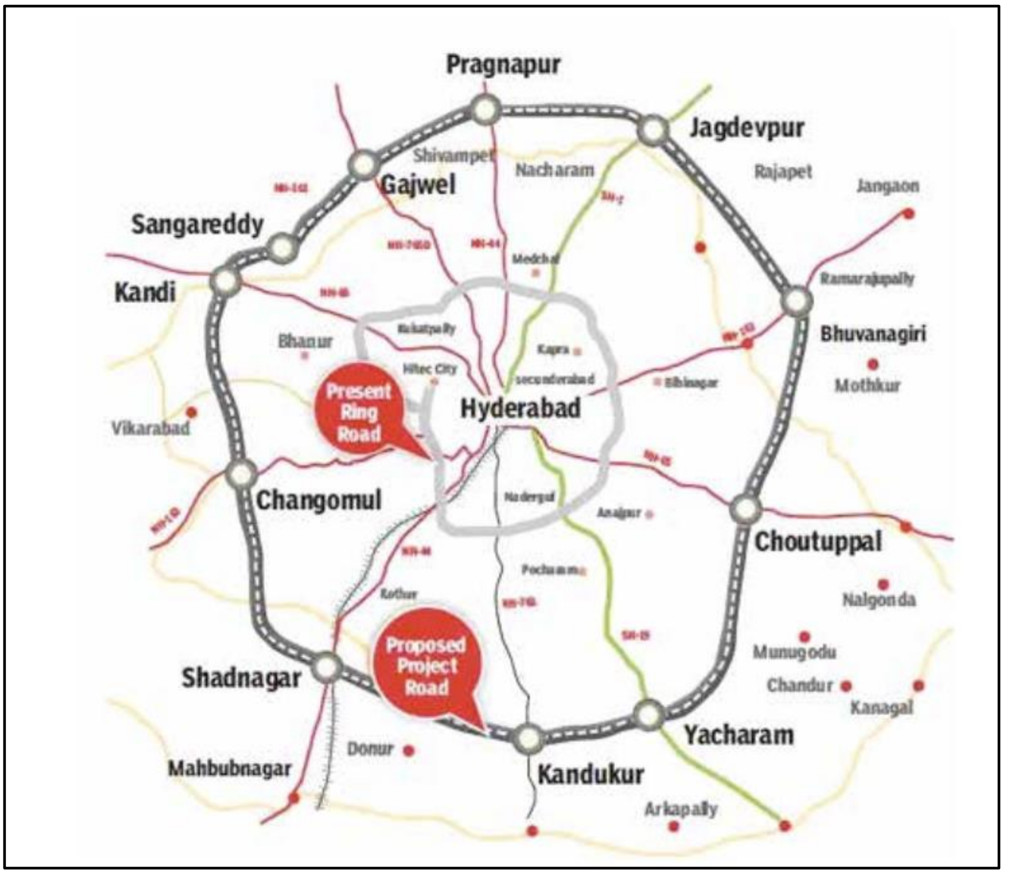
There is considerable industrial development on peripheries of Hyderabad as well. ORR being a fast connectivity has provided boost to such development. Following figure marks such developments on periphery of Hyderabad.



All above discussion indicates that Hyderabad is going to witness a good growth in near decade and would sustain on that.

Proposed Regional Ring Road (RRR)- Hydearabad

- An 8-lane expressway stretched over 340 km of length with a project cost Rs 17,000 crore is proposed to strengthen the existing roads connecting major national highways passing through Telangana, easing the regional road connectivity.
- The road will be developed at par with international standards over a stretch from Sangareddy to Kandi via Narsapur, Toopran, Gajwel, Jagdevpur, Bhongir, Choutuppal, Ibrahimpatnam, Chevella and Shankarapalli
- The RRR will have amenities such as parking, food courts, toilets, parks, children play area, malls, and drinking water facilities.
- The RRR will connect the surrounding districts with Hyderabad and to the Industrial Clusters, covering 40 of the region's population and will link 20 towns with National Highways.



Source: Pink-Book.pdf (telangana.gov.in)

As Proposed Regional Ring Road (RRR) would have faster connectivity to all important urban/commercial establishment, development of RRR has potential to alter focus of growth around Hyderabad Metropolitan Region.

4.4 Trend Analysis

Time series data of vehicle Registered in state of concerned states is taken from respective authorized websites and the same is used as the base data for analysis of growth.

Growth of vehicle traffic depends on type of vehicle. Traffic growth on any highway typically depends on number of economic parameters like

- Per Capita Income
- Net State Domestic Product (NSDP)

- Population

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. Same is recommended in IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways.

Following can be pair of vehicle type and independent variable for elasticity modelling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

Same is used in analysis below.

Vehicle Registered at the end of financial year in the state of Delhi, Haryana and Uttar Pradesh is given in tables below and also compared with the growth rate achieved in terms of vehicle registered on all India bases.

4.5 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish the relationship between the growth in number of given categories of vehicle with one of the economic variables considered, such as NSDP, per capita income and population growth.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is as given below:

Log (P) = k x Log (EI) + A

Where,

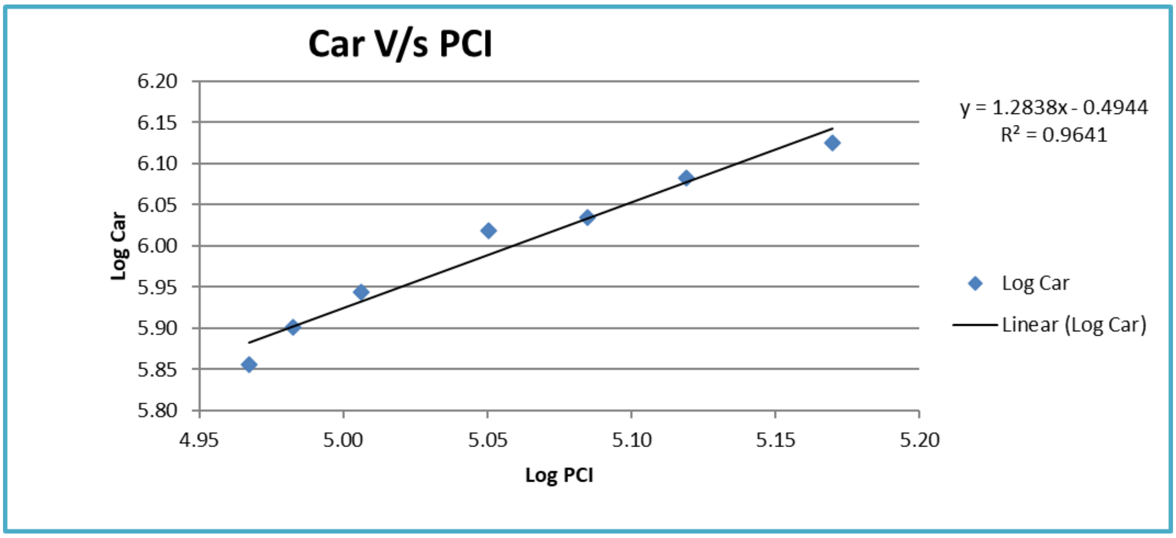
P = Number of Vehicles (Mode wise)

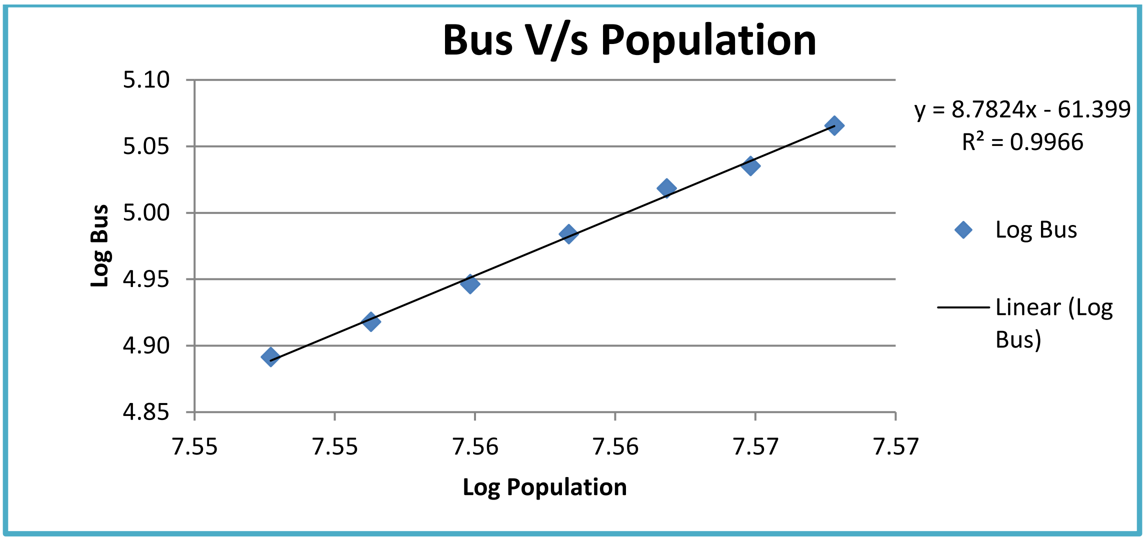
EI = Economic Indicator

A = Regression constant

k = Elasticity coefficient (Regression coefficient)

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP). The graphical presentation of the elasticity is presented in figures below:





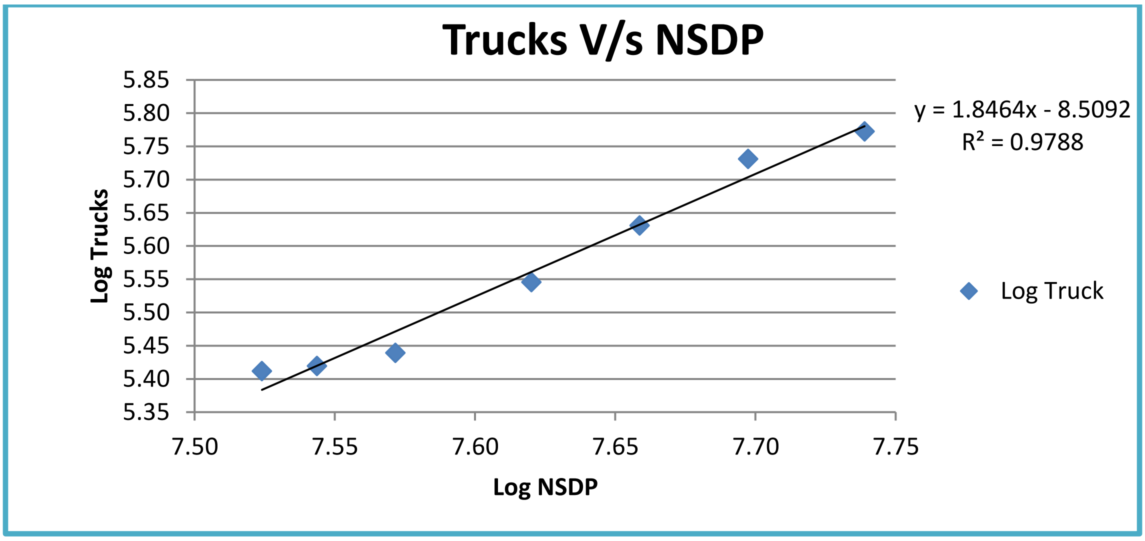
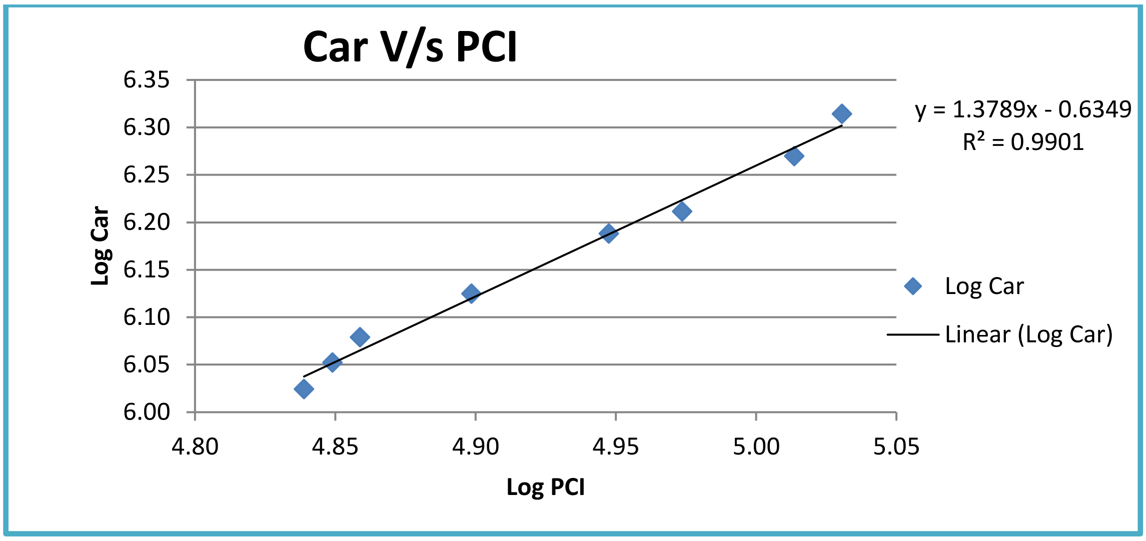
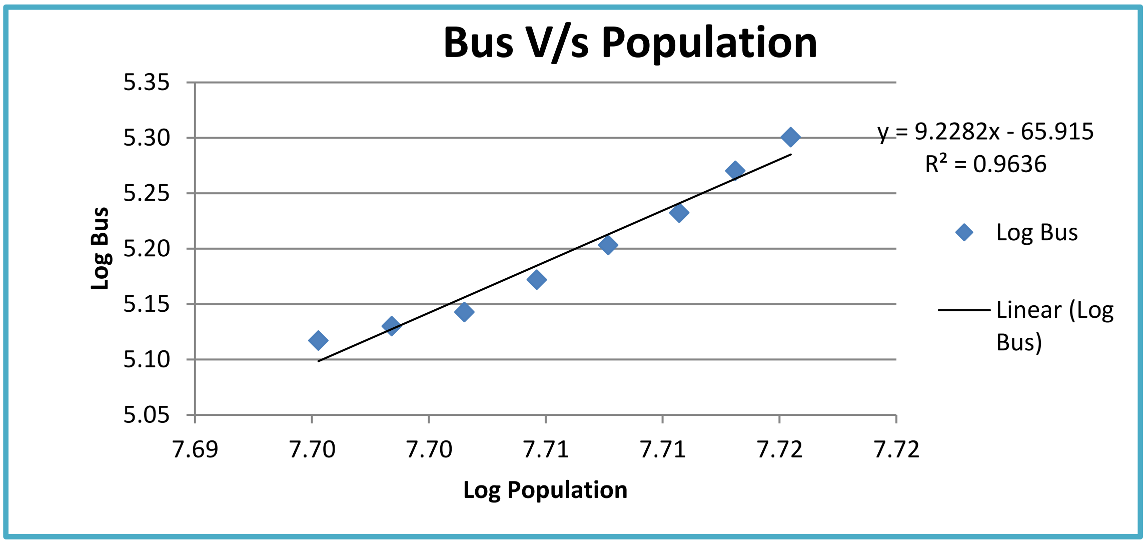


Figure 4-1: Elasticity by Graphical Extrapolation for Telangana





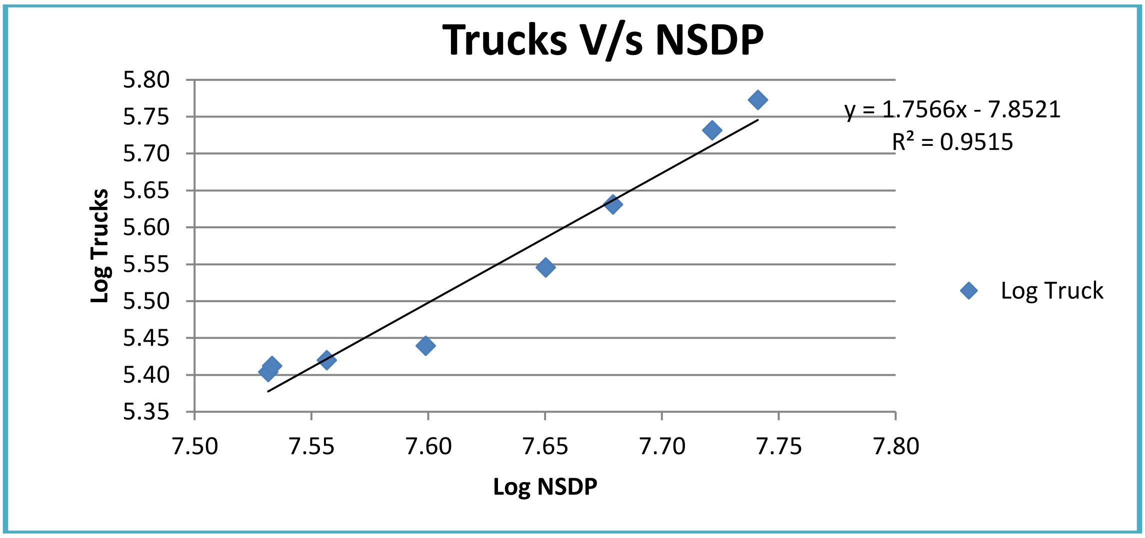
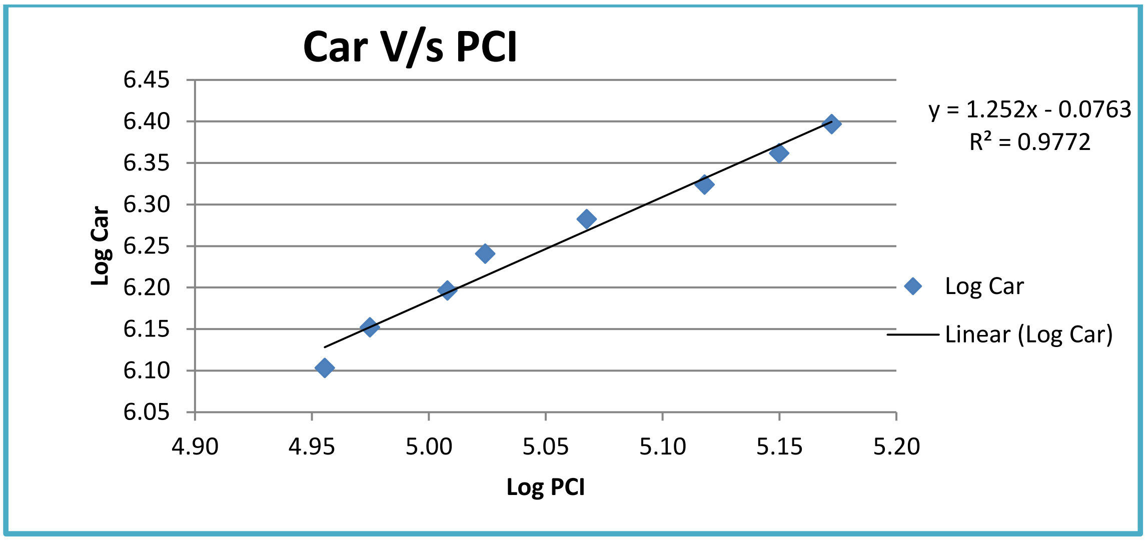
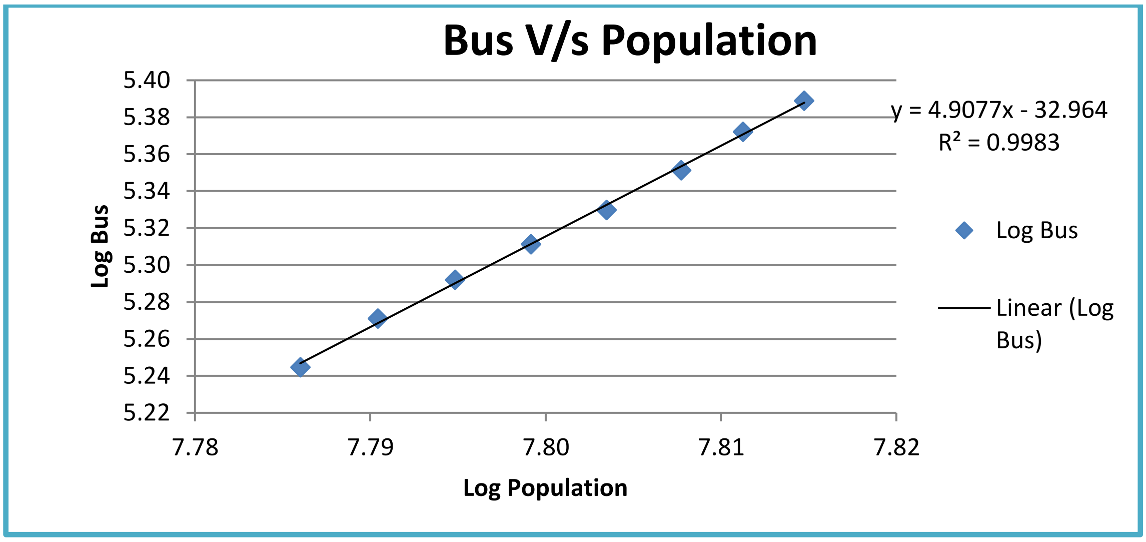


Figure 4-2: Elasticity by Graphical Extrapolation for Andra Pradesh





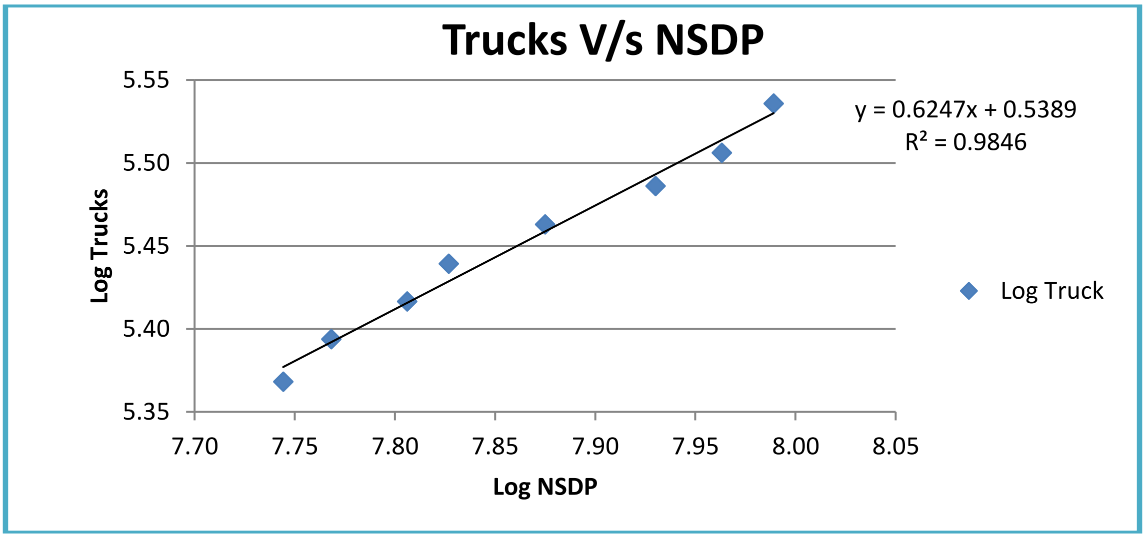
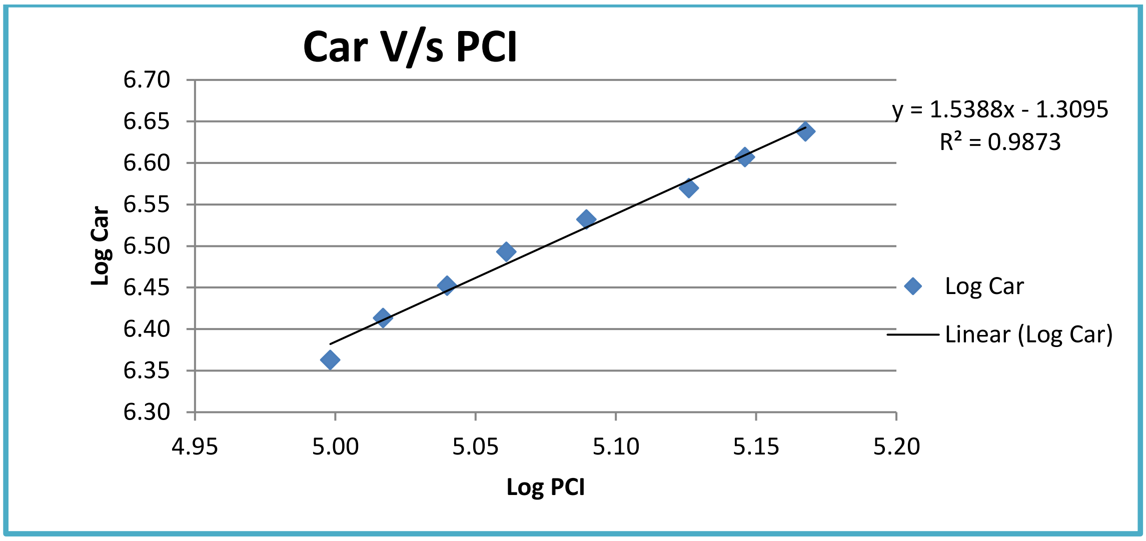
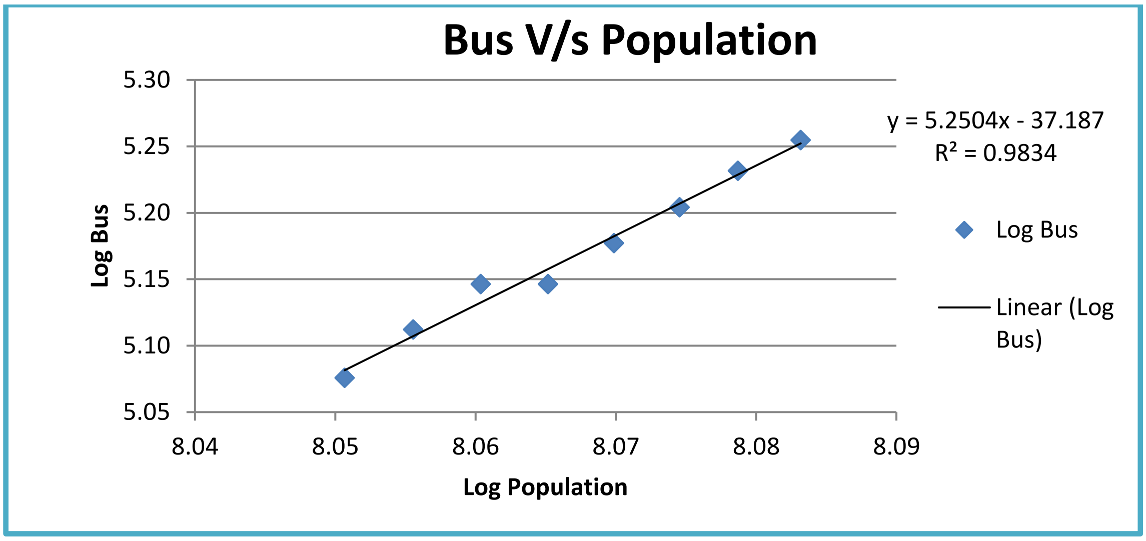


Figure 4-3: Elasticity by Graphical Extrapolation for Karnataka





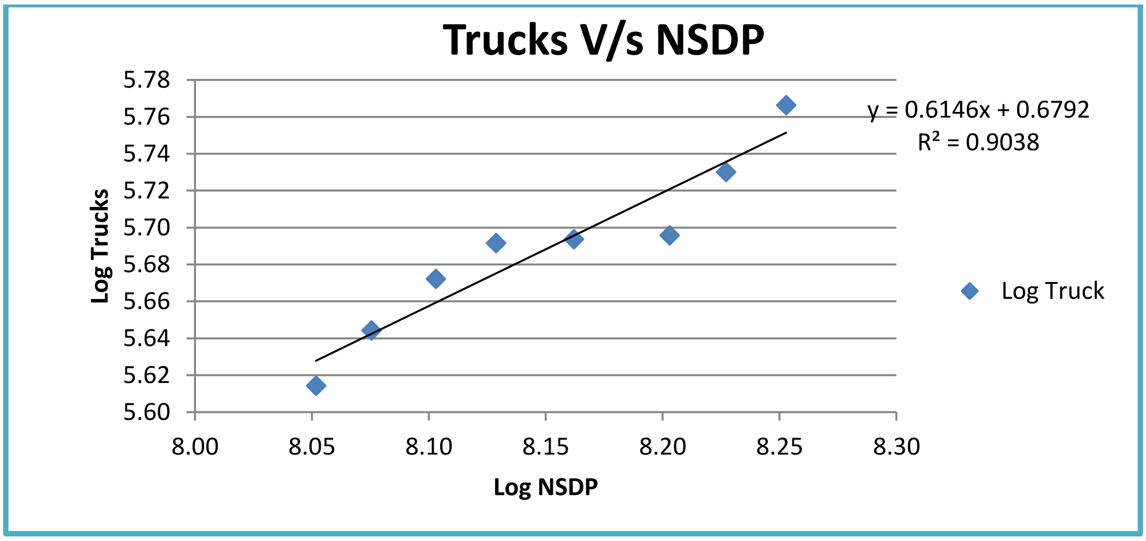


Figure 4-4: Elasticity by Graphical Extrapolation for Maharashtra

It shall be noted that the growth rates for various modes are not same as they are influenced by different parameters. In other words, whilst the growth of the passenger vehicles (cars, Jeeps, two wheelers and even buses) could be attributed to the growth in the per capita income, population growth and vehicle registration growth, the growth of the LCV, Trucks, Multi Axle Trucks are found to be influenced with factors including the industrial production and growth of the National or state Domestic products.

For establishing the elasticity equations, details regarding NSDP/GDP, per capita income, population growth and registered vehicles in the state have been collected for the past few years and are presented in the Annexure. Based on this data, Log-Log regression curve fits have been developed for each type of vehicle with the most suitable parameters and the elasticity values obtained.

The results of these analyses for the good fit as reflected by R^2 values are presented in the table below.

Table 4-1 : Results of Regression analysis

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient
TELANGANA	Car/Jeep	PCI	y = 1.2838x - - 0.4944	R² = 0.9641	1.2838
	Bus	Population	y = 8.7824x - - 61.3985	R² = 0.9966	8.7824
	Truck	NSDP	y = 1.8464x - - 8.5092	R² = 0.9788	1.8464
ANDRAPRADESH	Car/Jeep	PCI	y = 1.3789x - - 0.6349	R² = 0.9901	1.3789
	Bus	Population	y = 9.2282x - - 65.9151	R² = 0.9636	9.2282
	Truck	NSDP	y = 1.7566x - - 7.8521	R² = 0.9515	1.7566
KARNATAKA	Car/Jeep	PCI	y = 1.252x - - 0.0763	R² = 0.9772	1.252
	Bus	Population	y = 4.9077x - - 32.9642	R² = 0.9983	4.9077
	Truck	NSDP	y = 0.6247x - 0.5389	R² = 0.9846	0.6247
MAHARASHTRA	Car/Jeep	PCI	y = 1.5388x - - 1.3095	R² = 0.9873	1.5388
	Bus	Population	y = 5.2504x - - 37.1874	R² = 0.9834	5.2504
	Truck	NSDP	y = 0.6146x - 0.6792	R² = 0.9038	0.6146

However, considering factors such as proposed developments and other influencing economic factors moderated growth factors as listed below are considered. Change all tables.

4.6 Basis for arriving at growth rates.

Arriving at growth rates for each mode on particular road stretch is always a complex issue. Transportation planners before arriving at such growth rates have to have a comprehensive understanding of the various disciplines such as land use, economy, automobile industry, anticipated changes in the region, traffic, and other related issues.

Giving due consideration to all the factors elaborated in the previous sections, three growth scenarios are suggested with a wide range of growth rates which are resilient and ready to respond to the changes in socio-economic conditions which are likely to influence the project corridor.

4.7 Growth of Economy and Projection of GDP in India and States

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

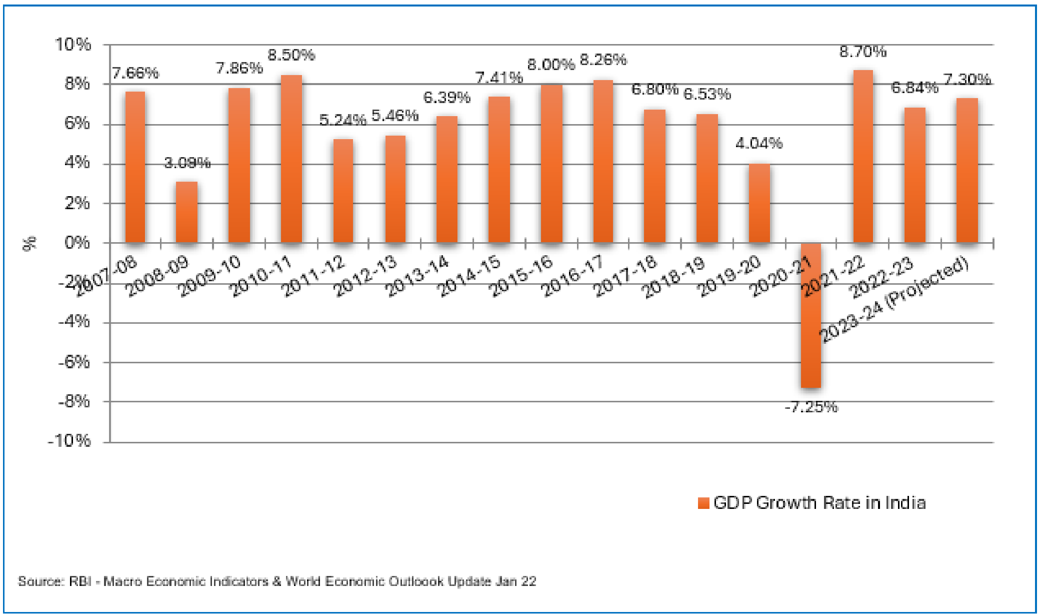


Figure 4-5 : Growth of GDP in India

After witnessing a slowdown during previous years, the economy is expected to firm up further in coming years. The growth outlook for the Indian economy in the medium and long term remains upbeat and positive. Therefore, in this study, in base case scenario, it is assumed that a GDP growth rate of around 8% will be sustained up to the year 2028 and thereafter for every five-year period the GDP growth rate is reduced. Similarly other independent variables of Per Capita Income (PCI) and Population is growth is assumed. Following table shows summary of such assumption.

Table 4-2 : Growth of Independent Variables

Assumed Growth Rate of Independent Indicators							
Indicator	**2024-2028**	**2028-2033**	**2033-2038**	**2038-2043**	**2043-2048**	**2048-2053**	**2053-2058**
PCI	7.71%	6.71%	5.00%	4.50%	4.00%	3.50%	3.50%
Population	0.76%	0.71%	0.66%	0.61%	0.56%	0.51%	0.51%
NSDP	8.15%	6.15%	4.15%	3.15%	2.15%	1.15%	1.15%

4.7.1 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle are as under.

Table 4-3: Recommended Growth Rates Pessimistic case

Category / Year	2024-2028	2028-2033	2033-2038	2038-2043	2043-2048	2048-2053	2053-2058
Car/Jeep/Van	6.81%	5.43%	3.63%	2.77%	2.01%	1.36%	1.36%
Bus	4.67%	4.26%	3.87%	3.49%	3.12%	2.76%	2.76%
Minibus	4.67%	4.26%	3.87%	3.49%	3.12%	2.76%	2.76%
LCV	3.02%	2.03%	1.16%	0.73%	0.35%	0.04%	0.04%
2- Axle	3.02%	2.03%	1.16%	0.73%	0.35%	0.04%	0.04%
3 - Axle	4.10%	2.79%	1.64%	1.05%	0.55%	0.13%	0.13%
4 to6 Axle	4.10%	2.79%	1.64%	1.05%	0.55%	0.13%	0.13%
7 and Above Axle	4.10%	2.79%	1.64%	1.05%	0.55%	0.13%	0.13%

Table 4-4: Recommended Growth Rates Most likely case

Category / Year	2024-2028	2028-2033	2033-2038	2038-2043	2043-2048	2048-2053	2053-2058
Car/Jeep/Van	7.06%	5.68%	3.88%	3.02%	2.26%	1.61%	1.61%
Bus	4.92%	4.51%	4.12%	3.74%	3.37%	3.01%	3.01%
Minibus	4.92%	4.51%	4.12%	3.74%	3.37%	3.01%	3.01%
LCV	3.27%	2.28%	1.41%	0.98%	0.60%	0.29%	0.29%
2- Axle	3.27%	2.28%	1.41%	0.98%	0.60%	0.29%	0.29%
3 - Axle	4.35%	3.04%	1.89%	1.30%	0.80%	0.38%	0.38%
4 to6 Axle	4.35%	3.04%	1.89%	1.30%	0.80%	0.38%	0.38%
7 and Above Axle	4.35%	3.04%	1.89%	1.30%	0.80%	0.38%	0.38%

Table 4-5: Recommended Growth Rates Optimistic case

Category / Year	2024-2028	2028-2033	2033-2038	2038-2043	2043-2048	2048-2053	2053-2058
Car/Jeep/Van	7.31%	5.93%	4.13%	3.27%	2.51%	1.86%	1.86%
Bus	5.17%	4.76%	4.37%	3.99%	3.62%	3.26%	3.26%
Minibus	5.17%	4.76%	4.37%	3.99%	3.62%	3.26%	3.26%
LCV	3.52%	2.53%	1.66%	1.23%	0.85%	0.54%	0.54%
2- Axle	3.52%	2.53%	1.66%	1.23%	0.85%	0.54%	0.54%
3 - Axle	4.60%	3.29%	2.14%	1.55%	1.05%	0.63%	0.63%
4 to6 Axle	4.60%	3.29%	2.14%	1.55%	1.05%	0.63%	0.63%
7 and Above Axle	4.60%	3.29%	2.14%	1.55%	1.05%	0.63%	0.63%

CHAPTER 5

FORECAST OF TOLL REVENUE

5.1 General

This chapter presents the estimates of traffic forecast, tolling categories, tolling rate calculations and toll revenue of the project.

5.2 Toll Rate Guidelines

Toll rates at NORR are governed by "Nehru Outer Ring Road Hyderabad (Toll) Rules -2012 issued by Municipal Administration and Urban Development Department / Hyderabad Metropolitan Area Development Authority and Hyderabad Growth Corridor Limited. This policy was recently amended by circular dated 12th January 2023.

The policy is similar to NHAI toll rate policy. Basic rate and rate revision policy same as NHAI Policy. The basic per km rate however have been enhanced for categories as under.

Sl. No.	Vehicle types	Enhancement factor
1.	Cars/ Jeep/ Van/ LMV/ SUV/ MPV	50%
2.	LCV/ Mini Bus	50%
3.	Bus/ 2-axle Truck	27%
4.	3-axle commercial vehicles	50%
5.	Heavy Construction Machinery/ Earth Moving Equipment/ 4/5/6 axle trucks	50%
6.	Oversized vehicles (7 or more axles)	50%

Figure 5-1: Base Rate (Per Km) enhancement as per NORR amendment Policy.

In amendment of policy provision of penalty for entering to fast tag lane without having valid fast tag and also for overloading of vehicles has been added. Penalty for fast tag lane violation is double the normal fee and overloaded vehicles would have to pay 10 times the toll rate for category. These are similar to NHAI policy.

5.4 Discounts

As per the Fee Notification (Schedule-R) fee discounts shall be provided to project users as under

- Local discount for non-commercial vehicle owner with in 20 km of toll plaza is not included in schedule M.

5.4 Travel Passes

As per the Fee Notification (Schedule-R) fee discounts shall be provided to project users as under

1. Monthly Pass: For frequent user's monthly pass would have not more than 50 trips per month at 2/3rd rate
2. Daily Pass (for Return Trip): A 75% discount will be offered on the return trip.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.

5.2 Segmentation of traffic

Journet type traffic segmentation has been provided by Concessionaire for all toll plazas. Same has been used for future revenue working as well.

5.2 Estimation of Toll Rates

As per the notification issued for toll policy the following Base rate of fee for the categories mentioned are applicable as base rate.

Table 5-1 : Base Toll Rates 2007 - 08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (2 Axle)	2.2
Three Axle commercial vehicles	2.4
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4-6 axles)	3.45
Oversized Vehicle (seven or more axles)	4.2

These rates are then modified for as per procedure provided in guidelines of notification taking into account factors listed below.

- These base rates have been enhanced by factors as mentioned in amendment to NORR Toll Policy dated 12th January 2023.
- Annual revision of fee rate - @3%

- Application of WPI
- a growth rate of 5% is assumed for WPI of future years.
- As fee for structures is included in equivalent length at each toll plaza same shall not be considered separately

Applicable length for journey type at each toll plaza as per schedule M is given as under

Table 5-2 : Tollable Length

Name of IC		Kokapet	Neopolis	Edula nagulapally	Patancheru	Sultanpur	Mallampet	Dindigal/ Saragudem	Medchal	Shamirpet	Keesara	Ghatkesar	Taramptipet	Pedda Amberpet	Bonguluru	Raviryal	Tukkuguda	Pedda Golconda	Shamshabad	Rajendra Nagar	TSPA	Narsingi	Nanakramguda
	F/T	**1**	**1A**	**2**	**3**	**4**	**4A**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**18A**	**19**
Kokapet	**1**	0.000	1.700	11.900	20.500	29.000	35.000	40.700	50.200	59.100	71.000	74.112	65.862	58.962	46.712	39.612	34.112	25.862	19.512	11.262	7.962	3.612	7.252
Neopolis	**1A**	1.700	0.000	10.200	18.800	27.300	33.300	39.000	48.500	57.400	69.300	75.760	67.562	60.662	48.412	41.312	35.812	27.562	21.212	12.962	9.662	5.312	8.952
Edula nagulapally	**2**	11.900	10.200	0.000	8.600	17.100	23.100	28.800	38.300	47.200	59.100	67.650	75.850	70.862	58.612	51.512	46.012	37.762	31.412	23.162	19.862	15.512	19.152
Patancheru	**3**	20.500	18.800	8.600	0.000	8.500	14.500	20.200	29.700	38.600	50.500	59.050	67.250	74.150	67.212	60.112	54.612	46.362	40.012	31.762	28.462	24.112	27.752
Sultanpur	**4**	29.000	27.300	17.100	8.500	0.000	6.000	11.700	21.200	30.100	42.000	50.550	58.750	65.650	75.712	68.612	63.112	54.862	48.512	40.262	36.962	32.612	36.252
Mallampet	**4A**	35.000	33.300	23.100	14.500	6.000	0.000	5.700	15.200	24.100	36.000	44.550	52.750	59.650	71.900	74.612	69.112	60.862	54.512	46.262	42.962	38.612	42.252
Dindigal/ Saragudem	**5**	40.700	39.000	28.800	20.200	11.700	5.700	0.000	9.500	18.400	30.300	38.850	47.050	53.950	66.200	73.300	74.812	66.562	60.212	51.962	48.662	44.312	47.952
Medchal	**6**	50.200	48.500	38.300	29.700	21.200	15.200	9.500	0.000	8.900	20.800	29.350	37.550	44.450	56.700	63.800	69.300	76.062	69.712	61.462	58.162	53.812	57.452
Shamirpet	**7**	59.100	57.400	47.200	38.600	30.100	24.100	18.400	8.900	0.000	11.900	20.450	28.650	35.550	47.800	54.900	60.400	68.650	75.000	70.362	67.062	62.712	66.352
Keesara	**8**	71.000	69.300	59.100	50.500	42.000	36.000	30.300	20.800	11.900	0.000	8.550	16.750	23.650	35.900	43.000	48.500	56.750	63.100	71.350	74.650	74.612	78.252
Ghatkesar	**9**	74.112	75.760	67.650	59.050	50.550	44.550	38.850	29.350	20.450	8.550	0.000	8.200	15.100	27.350	34.450	39.950	48.200	54.550	62.800	66.100	70.450	76.610
Taramptipet	**10**	65.862	67.562	75.850	67.250	58.750	52.750	47.050	37.550	28.650	16.750	8.200	0.000	6.900	19.150	26.250	31.750	40.000	46.350	54.600	57.900	62.250	68.410
Pedda Amberpet	**11**	58.962	60.662	70.862	74.150	65.650	59.650	53.950	44.450	35.550	23.650	15.100	6.900	0.000	12.250	19.350	24.850	33.100	39.450	47.700	51.000	55.350	61.510
Bonguluru	**12**	46.712	48.412	58.612	67.212	75.712	71.900	66.200	56.700	47.800	35.900	27.350	19.150	12.250	0.000	7.100	12.600	20.850	27.200	35.450	38.750	43.100	49.260
Raviryal	**13**	39.612	41.312	51.512	60.112	68.612	74.612	73.300	63.800	54.900	43.000	34.450	26.250	19.350	7.100	0.000	5.500	13.750	20.100	28.350	31.650	36.000	42.160
Tukkuguda	**14**	34.112	35.812	46.012	54.612	63.112	69.112	74.812	69.300	60.400	48.500	39.950	31.750	24.850	12.600	5.500	0.000	8.250	14.600	22.850	26.150	30.500	36.660
Pedda Golconda	**15**	25.862	27.562	37.762	46.362	54.862	60.862	66.562	76.062	68.650	56.750	48.200	40.000	33.100	20.850	13.750	8.250	0.000	6.350	14.600	17.900	22.250	28.410
Shamshabad	**16**	19.512	21.212	31.412	40.012	48.512	54.512	60.212	69.712	75.000	63.100	54.550	46.350	39.450	27.200	20.100	14.600	6.350	0.000	8.250	11.550	15.900	22.060
Rajendra Nagar	**17**	11.262	12.962	23.162	31.762	40.262	46.262	51.962	61.462	70.362	71.350	62.800	54.600	47.700	35.450	28.350	22.850	14.600	8.250	0.000	3.300	7.650	13.810
TSPA	**18**	7.962	9.662	19.862	28.462	36.962	42.962	48.662	58.162	67.062	74.650	66.100	57.900	51.000	38.750	31.650	26.150	17.900	11.550	3.300	0.000	4.350	10.510
Narsingi	**18A**	3.612	5.312	15.512	24.112	32.612	38.612	44.312	53.812	62.712	74.612	70.450	62.250	55.350	43.100	36.000	30.500	22.250	15.900	7.650	4.350	0.000	6.160
Nanakramguda	**19**	7.252	8.952	19.152	27.752	36.252	42.252	47.952	57.452	66.352	78.252	76.610	68.410	61.510	49.260	42.160	36.660	28.410	22.060	13.810	10.510	6.160	0.000

Accordingly on the basis of above tollable lengths, toll rates of various categories of vehicle at different toll plaza locations are calculated. The adopted Toll Rates for all categories of vehicles for base year are given tables below.

Single Journey

Table 5-3: Car/Jeep/Van Toll Rates for Year 2023-2024 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	30	50	70	80	90	110	130	160	170	150	130	110	90	80	60	40	30	20	10	20
1A	10	0	20	40	60	80	90	110	130	160	170	150	140	110	90	80	60	50	30	20	10	20
2	30	20	0	20	40	50	70	90	110	130	150	170	160	130	120	100	90	70	50	40	40	40
3	50	40	20	0	20	30	50	70	90	110	130	150	170	150	140	120	100	90	70	60	50	60
4	70	60	40	20	0	10	30	50	70	90	110	130	150	170	150	140	120	110	90	80	70	80
4A	80	80	50	30	10	0	10	30	50	80	100	120	130	160	170	160	140	120	100	100	90	100
5	90	90	70	50	30	10	0	20	40	70	90	110	120	150	170	170	150	140	120	110	100	110
6	110	110	90	70	50	30	20	0	20	50	70	80	100	130	140	160	170	160	140	130	120	130
7	130	130	110	90	70	50	40	20	0	30	50	60	80	110	120	140	150	170	160	150	140	150
8	160	160	130	110	90	80	70	50	30	0	20	40	50	80	100	110	130	140	160	170	170	180
9	170	170	150	130	110	100	90	70	50	20	0	20	30	60	80	90	110	120	140	150	160	170
10	150	150	170	150	130	120	110	80	60	40	20	0	20	40	60	70	90	100	120	130	140	150
11	130	140	160	170	150	130	120	100	80	50	30	20	0	30	40	60	70	90	110	120	120	140
12	110	110	130	150	170	160	150	130	110	80	60	40	30	0	20	30	50	60	80	90	100	110
13	90	90	120	140	150	170	170	140	120	100	80	60	40	20	0	10	30	50	60	70	80	100
14	80	80	100	120	140	160	170	160	140	110	90	70	60	30	10	0	20	30	50	60	70	80
15	60	60	90	100	120	140	150	170	150	130	110	90	70	50	30	20	0	10	30	40	50	60
16	40	50	70	90	110	120	140	160	170	140	120	100	90	60	50	30	10	0	20	30	40	50
17	30	30	50	70	90	100	120	140	160	160	140	120	110	80	60	50	30	20	0	10	20	30
18	20	20	40	60	80	100	110	130	150	170	150	130	120	90	70	60	40	30	10	0	10	20
18A	10	10	40	50	70	90	100	120	140	170	160	140	120	100	80	70	50	40	20	10	0	10
19	20	20	40	60	80	100	110	130	150	180	170	150	140	110	100	80	60	50	30	20	10	0

Table 5-4: Minibus/LCV Toll Rates for Year 2023-2024 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	40	70	110	130	150	180	220	260	270	240	220	170	140	120	90	70	40	30	10	30
1A	10	0	40	70	100	120	140	180	210	250	280	250	220	180	150	130	100	80	50	40	20	30
2	40	40	0	30	60	80	110	140	170	220	250	280	260	210	190	170	140	110	80	70	60	70
3	70	70	30	0	30	50	70	110	140	180	220	250	270	250	220	200	170	150	120	100	90	100
4	110	100	60	30	0	20	40	80	110	150	180	210	240	280	250	230	200	180	150	130	120	130
4A	130	120	80	50	20	0	20	60	90	130	160	190	220	260	270	250	220	200	170	160	140	150
5	150	140	110	70	40	20	0	30	70	110	140	170	200	240	270	270	240	220	190	180	160	170
6	180	180	140	110	80	60	30	0	30	80	110	140	160	210	230	250	280	250	220	210	200	210
7	220	210	170	140	110	90	70	30	0	40	70	100	130	170	200	220	250	270	260	240	230	240
8	260	250	220	180	150	130	110	80	40	0	30	60	90	130	160	180	210	230	260	270	270	290
9	270	280	250	220	180	160	140	110	70	30	0	30	60	100	130	150	180	200	230	240	260	280
10	240	250	280	250	210	190	170	140	100	60	30	0	30	70	100	120	150	170	200	210	230	250
11	220	220	260	270	240	220	200	160	130	90	60	30	0	40	70	90	120	140	170	190	200	220
12	170	180	210	250	280	260	240	210	170	130	100	70	40	0	30	50	80	100	130	140	160	180
13	140	150	190	220	250	270	270	230	200	160	130	100	70	30	0	20	50	70	100	120	130	150
14	120	130	170	200	230	250	270	250	220	180	150	120	90	50	20	0	30	50	80	100	110	130
15	90	100	140	170	200	220	240	280	250	210	180	150	120	80	50	30	0	20	50	70	80	100
16	70	80	110	150	180	200	220	250	270	230	200	170	140	100	70	50	20	0	30	40	60	80
17	40	50	80	120	150	170	190	220	260	260	230	200	170	130	100	80	50	30	0	10	30	50
18	30	40	70	100	130	160	180	210	240	270	240	210	190	140	120	100	70	40	10	0	20	40
18A	10	20	60	90	120	140	160	200	230	270	260	230	200	160	130	110	80	60	30	20	0	20
19	30	30	70	100	130	150	170	210	240	290	280	250	220	180	150	130	100	80	50	40	20	0

Table 5-5: Bus/2-axle Toll Rates for Year 2023-2024 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	80	130	190	230	260	320	380	460	480	430	380	300	260	220	170	130	70	50	20	50
1A	10	0	70	120	180	220	250	310	370	450	490	440	390	310	270	230	180	140	80	60	30	60
2	80	70	0	60	110	150	190	250	310	380	440	490	460	380	330	300	240	200	150	130	100	120
3	130	120	60	0	50	90	130	190	250	330	380	440	480	430	390	350	300	260	210	180	160	180
4	190	180	110	50	0	40	80	140	190	270	330	380	420	490	440	410	350	310	260	240	210	230
4A	230	220	150	90	40	0	40	100	160	230	290	340	390	470	480	450	390	350	300	280	250	270
5	260	250	190	130	80	40	0	60	120	200	250	300	350	430	470	480	430	390	340	310	290	310
6	320	310	250	190	140	100	60	0	60	130	190	240	290	370	410	450	490	450	400	380	350	370
7	380	370	310	250	190	160	120	60	0	80	130	190	230	310	360	390	440	490	460	430	410	430
8	460	450	380	330	270	230	200	130	80	0	60	110	150	230	280	310	370	410	460	480	480	510
9	480	490	440	380	330	290	250	190	130	60	0	50	100	180	220	260	310	350	410	430	460	500
10	430	440	490	440	380	340	300	240	190	110	50	0	40	120	170	210	260	300	350	370	400	440
11	380	390	460	480	420	390	350	290	230	150	100	40	0	80	130	160	210	260	310	330	360	400
12	300	310	380	430	490	470	430	370	310	230	180	120	80	0	50	80	130	180	230	250	280	320
13	260	270	330	390	440	480	470	410	360	280	220	170	130	50	0	40	90	130	180	200	230	270
14	220	230	300	350	410	450	480	450	390	310	260	210	160	80	40	0	50	90	150	170	200	240
15	170	180	240	300	350	390	430	490	440	370	310	260	210	130	90	50	0	40	90	120	140	180
16	130	140	200	260	310	350	390	450	490	410	350	300	260	180	130	90	40	0	50	70	100	140
17	70	80	150	210	260	300	340	400	460	460	410	350	310	230	180	150	90	50	0	20	50	90
18	50	60	130	180	240	280	310	380	430	480	430	370	330	250	200	170	120	70	20	0	30	70
18A	20	30	100	160	210	250	290	350	410	480	460	400	360	280	230	200	140	100	50	30	0	40
19	50	60	120	180	230	270	310	370	430	510	500	440	400	320	270	240	180	140	90	70	40	0

Table 5-6: 3-axle Toll Rates for Year 2023-2024 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	100	170	240	290	340	420	490	590	620	550	490	390	330	280	220	160	90	70	30	60
1A	10	0	90	160	230	280	330	400	480	580	630	560	510	400	340	300	230	180	110	80	40	70
2	100	90	0	70	140	190	240	320	390	490	560	630	590	490	430	380	310	260	190	170	130	160
3	170	160	70	0	70	120	170	250	320	420	490	560	620	560	500	460	390	330	260	240	200	230
4	240	230	140	70	0	50	100	180	250	350	420	490	550	630	570	530	460	400	340	310	270	300
4A	290	280	190	120	50	0	50	130	200	300	370	440	500	600	620	580	510	450	390	360	320	350
5	340	330	240	170	100	50	0	80	150	250	320	390	450	550	610	620	550	500	430	410	370	400
6	420	400	320	250	180	130	80	0	70	170	240	310	370	470	530	580	630	580	510	480	450	480
7	490	480	390	320	250	200	150	70	0	100	170	240	300	400	460	500	570	630	590	560	520	550
8	590	580	490	420	350	300	250	170	100	0	70	140	200	300	360	400	470	530	590	620	620	650
9	620	630	560	490	420	370	320	240	170	70	0	70	130	230	290	330	400	450	520	550	590	640
10	550	560	630	560	490	440	390	310	240	140	70	0	60	160	220	260	330	390	460	480	520	570
11	490	510	590	620	550	500	450	370	300	200	130	60	0	100	160	210	280	330	400	430	460	510
12	390	400	490	560	630	600	550	470	400	300	230	160	100	0	60	110	170	230	300	320	360	410
13	330	340	430	500	570	620	610	530	460	360	290	220	160	60	0	50	110	170	240	260	300	350
14	280	300	380	460	530	580	620	580	500	400	330	260	210	110	50	0	70	120	190	220	250	310
15	220	230	310	390	460	510	550	630	570	470	400	330	280	170	110	70	0	50	120	150	190	240
16	160	180	260	330	400	450	500	580	630	530	450	390	330	230	170	120	50	0	70	100	130	180
17	90	110	190	260	340	390	430	510	590	590	520	460	400	300	240	190	120	70	0	30	60	120
18	70	80	170	240	310	360	410	480	560	620	550	480	430	320	260	220	150	100	30	0	40	90
18A	30	40	130	200	270	320	370	450	520	620	590	520	460	360	300	250	190	130	60	40	0	50
19	60	70	160	230	300	350	400	480	550	650	640	570	510	410	350	310	240	180	120	90	50	0

Table 5-7: 4 to 6 axle Toll Rates for Year 2023-2024 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	20	140	250	350	420	490	600	710	850	890	790	710	560	470	410	310	230	130	100	40	90
1A	20	0	120	230	330	400	470	580	690	830	910	810	730	580	490	430	330	250	160	120	60	110
2	140	120	0	100	200	280	350	460	570	710	810	910	850	700	620	550	450	380	280	240	190	230
3	250	230	100	0	100	170	240	360	460	610	710	810	890	810	720	650	560	480	380	340	290	330
4	350	330	200	100	0	70	140	250	360	500	610	700	790	910	820	760	660	580	480	440	390	430
4A	420	400	280	170	70	0	70	180	290	430	530	630	710	860	890	830	730	650	550	510	460	510
5	490	470	350	240	140	70	0	110	220	360	470	560	650	790	880	900	800	720	620	580	530	570
6	600	580	460	360	250	180	110	0	110	250	350	450	530	680	760	830	910	840	740	700	640	690
7	710	690	570	460	360	290	220	110	0	140	250	340	430	570	660	720	820	900	840	800	750	790
8	850	830	710	610	500	430	360	250	140	0	100	200	280	430	520	580	680	760	850	890	890	940
9	890	910	810	710	610	530	470	350	250	100	0	100	180	330	410	480	580	650	750	790	840	920
10	790	810	910	810	700	630	560	450	340	200	100	0	80	230	310	380	480	560	650	690	750	820
11	710	730	850	890	790	710	650	530	430	280	180	80	0	150	230	300	400	470	570	610	660	740
12	560	580	700	810	910	860	790	680	570	430	330	230	150	0	90	150	250	330	420	460	520	590
13	470	490	620	720	820	890	880	760	660	520	410	310	230	90	0	70	160	240	340	380	430	510
14	410	430	550	650	760	830	900	830	720	580	480	380	300	150	70	0	100	170	270	310	370	440
15	310	330	450	560	660	730	800	910	820	680	580	480	400	250	160	100	0	80	170	210	270	340
16	230	250	380	480	580	650	720	840	900	760	650	560	470	330	240	170	80	0	100	140	190	260
17	130	160	280	380	480	550	620	740	840	850	750	650	570	420	340	270	170	100	0	40	90	170
18	100	120	240	340	440	510	580	700	800	890	790	690	610	460	380	310	210	140	40	0	50	130
18A	40	60	190	290	390	460	530	640	750	890	840	750	660	520	430	370	270	190	90	50	0	70
19	90	110	230	330	430	510	570	690	790	940	920	820	740	590	510	440	340	260	170	130	70	0

Table 5-8: 7 & above axle Toll Rates for Year 2023-2024 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	20	170	300	420	510	590	730	860	1040	1080	960	860	680	580	500	380	280	160	120	50	110
1A	20	0	150	270	400	490	570	710	840	1010	1110	990	880	710	600	520	400	310	190	140	80	130
2	170	150	0	130	250	340	420	560	690	860	990	1110	1030	850	750	670	550	460	340	290	230	280
3	300	270	130	0	120	210	290	430	560	740	860	980	1080	980	880	800	680	580	460	420	350	400
4	420	400	250	120	0	90	170	310	440	610	740	860	960	1100	1000	920	800	710	590	540	480	530
4A	510	490	340	210	90	0	80	220	350	530	650	770	870	1050	1090	1010	890	800	670	630	560	620
5	590	570	420	290	170	80	0	140	270	440	570	690	790	970	1070	1090	970	880	760	710	650	700
6	730	710	560	430	310	220	140	0	130	300	430	550	650	830	930	1010	1110	1020	900	850	780	840
7	860	840	690	560	440	350	270	130	0	170	300	420	520	700	800	880	1000	1090	1030	980	910	970
8	1040	1010	860	740	610	530	440	300	170	0	120	240	340	520	630	710	830	920	1040	1090	1090	1140
9	1080	1110	990	860	740	650	570	430	300	120	0	120	220	400	500	580	700	800	920	960	1030	1120
10	960	990	1110	980	860	770	690	550	420	240	120	0	100	280	380	460	580	680	800	840	910	1000
11	860	880	1030	1080	960	870	790	650	520	340	220	100	0	180	280	360	480	580	700	740	810	900
12	680	710	850	980	1100	1050	970	830	700	520	400	280	180	0	100	180	300	400	520	570	630	720
13	580	600	750	880	1000	1090	1070	930	800	630	500	380	280	100	0	80	200	290	410	460	530	610
14	500	520	670	800	920	1010	1090	1010	880	710	580	460	360	180	80	0	120	210	330	380	440	530
15	380	400	550	680	800	890	970	1110	1000	830	700	580	480	300	200	120	0	90	210	260	320	410
16	280	310	460	580	710	800	880	1020	1090	920	800	680	580	400	290	210	90	0	120	170	230	320
17	160	190	340	460	590	670	760	900	1030	1040	920	800	700	520	410	330	210	120	0	50	110	200
18	120	140	290	420	540	630	710	850	980	1090	960	840	740	570	460	380	260	170	50	0	60	150
18A	50	80	230	350	480	560	650	780	910	1090	1030	910	810	630	530	440	320	230	110	60	0	90
19	110	130	280	400	530	620	700	840	970	1140	1120	1000	900	720	610	530	410	320	200	150	90	0

Return Journey

Table 5-9: Car/Jeep/Van Toll Rates for Year 2023-2024 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	5	15	25	35	40	45	55	65	80	85	75	65	55	45	40	30	20	15	10	5	10
1A	5	0	10	20	30	40	45	55	65	80	85	75	70	55	45	40	30	25	15	10	5	10
2	15	10	0	10	20	25	35	45	55	65	75	85	80	65	60	50	45	35	25	20	20	20
3	25	20	10	0	10	15	25	35	45	55	65	75	85	75	70	60	50	45	35	30	25	30
4	35	30	20	10	0	5	15	25	35	45	55	65	75	85	75	70	60	55	45	40	35	40
4A	40	40	25	15	5	0	5	15	25	40	50	60	65	80	85	80	70	60	50	50	45	50
5	45	45	35	25	15	5	0	10	20	35	45	55	60	75	85	85	75	70	60	55	50	55
6	55	55	45	35	25	15	10	0	10	25	35	40	50	65	70	80	85	80	70	65	60	65
7	65	65	55	45	35	25	20	10	0	15	25	30	40	55	60	70	75	85	80	75	70	75
8	80	80	65	55	45	40	35	25	15	0	10	20	25	40	50	55	65	70	80	85	85	90
9	85	85	75	65	55	50	45	35	25	10	0	10	15	30	40	45	55	60	70	75	80	85
10	75	75	85	75	65	60	55	40	30	20	10	0	10	20	30	35	45	50	60	65	70	75
11	65	70	80	85	75	65	60	50	40	25	15	10	0	15	20	30	35	45	55	60	60	70
12	55	55	65	75	85	80	75	65	55	40	30	20	15	0	10	15	25	30	40	45	50	55
13	45	45	60	70	75	85	85	70	60	50	40	30	20	10	0	5	15	25	30	35	40	50
14	40	40	50	60	70	80	85	80	70	55	45	35	30	15	5	0	10	15	25	30	35	40
15	30	30	45	50	60	70	75	85	75	65	55	45	35	25	15	10	0	5	15	20	25	30
16	20	25	35	45	55	60	70	80	85	70	60	50	45	30	25	15	5	0	10	15	20	25
17	15	15	25	35	45	50	60	70	80	80	70	60	55	40	30	25	15	10	0	5	10	15
18	10	10	20	30	40	50	55	65	75	85	75	65	60	45	35	30	20	15	5	0	5	10
18A	5	5	20	25	35	45	50	60	70	85	80	70	60	50	40	35	25	20	10	5	0	5
19	10	10	20	30	40	50	55	65	75	90	85	75	70	55	50	40	30	25	15	10	5	0

Table 5-10: Minibus/LCV Toll Rates for Year 2023-2024 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	5	20	35	55	65	75	90	110	130	135	120	110	85	70	60	45	35	20	15	5	15
1A	5	0	20	35	50	60	70	90	105	125	140	125	110	90	75	65	50	40	25	20	10	15
2	20	20	0	15	30	40	55	70	85	110	125	140	130	105	95	85	70	55	40	35	30	35
3	35	35	15	0	15	25	35	55	70	90	110	125	135	125	110	100	85	75	60	50	45	50
4	55	50	30	15	0	10	20	40	55	75	90	105	120	140	125	115	100	90	75	65	60	65
4A	65	60	40	25	10	0	10	30	45	65	80	95	110	130	135	125	110	100	85	80	70	75
5	75	70	55	35	20	10	0	15	35	55	70	85	100	120	135	135	120	110	95	90	80	85
6	90	90	70	55	40	30	15	0	15	40	55	70	80	105	115	125	140	125	110	105	100	105
7	110	105	85	70	55	45	35	15	0	20	35	50	65	85	100	110	125	135	130	120	115	120
8	130	125	110	90	75	65	55	40	20	0	15	30	45	65	80	90	105	115	130	135	135	145
9	135	140	125	110	90	80	70	55	35	15	0	15	30	50	65	75	90	100	115	120	130	140
10	120	125	140	125	105	95	85	70	50	30	15	0	15	35	50	60	75	85	100	105	115	125
11	110	110	130	135	120	110	100	80	65	45	30	15	0	20	35	45	60	70	85	95	100	110
12	85	90	105	125	140	130	120	105	85	65	50	35	20	0	15	25	40	50	65	70	80	90
13	70	75	95	110	125	135	135	115	100	80	65	50	35	15	0	10	25	35	50	60	65	75
14	60	65	85	100	115	125	135	125	110	90	75	60	45	25	10	0	15	25	40	50	55	65
15	45	50	70	85	100	110	120	140	125	105	90	75	60	40	25	15	0	10	25	35	40	50
16	35	40	55	75	90	100	110	125	135	115	100	85	70	50	35	25	10	0	15	20	30	40
17	20	25	40	60	75	85	95	110	130	130	115	100	85	65	50	40	25	15	0	5	15	25
18	15	20	35	50	65	80	90	105	120	135	120	105	95	70	60	50	35	20	5	0	10	20
18A	5	10	30	45	60	70	80	100	115	135	130	115	100	80	65	55	40	30	15	10	0	10
19	15	15	35	50	65	75	85	105	120	145	140	125	110	90	75	65	50	40	25	20	10	0

Table 5-11: Bus/2-axle Toll Rates for Year 2023-2024 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	5	40	65	95	115	130	160	190	230	240	215	190	150	130	110	85	65	35	25	10	25
1A	5	0	35	60	90	110	125	155	185	225	245	220	195	155	135	115	90	70	40	30	15	30
2	40	35	0	30	55	75	95	125	155	190	220	245	230	190	165	150	120	100	75	65	50	60
3	65	60	30	0	25	45	65	95	125	165	190	220	240	215	195	175	150	130	105	90	80	90
4	95	90	55	25	0	20	40	70	95	135	165	190	210	245	220	205	175	155	130	120	105	115
4A	115	110	75	45	20	0	20	50	80	115	145	170	195	235	240	225	195	175	150	140	125	135
5	130	125	95	65	40	20	0	30	60	100	125	150	175	215	235	240	215	195	170	155	145	155
6	160	155	125	95	70	50	30	0	30	65	95	120	145	185	205	225	245	225	200	190	175	185
7	190	185	155	125	95	80	60	30	0	40	65	95	115	155	180	195	220	245	230	215	205	215
8	230	225	190	165	135	115	100	65	40	0	30	55	75	115	140	155	185	205	230	240	240	255
9	240	245	220	190	165	145	125	95	65	30	0	25	50	90	110	130	155	175	205	215	230	250
10	215	220	245	220	190	170	150	120	95	55	25	0	20	60	85	105	130	150	175	185	200	220
11	190	195	230	240	210	195	175	145	115	75	50	20	0	40	65	80	105	130	155	165	180	200
12	150	155	190	215	245	235	215	185	155	115	90	60	40	0	25	40	65	90	115	125	140	160
13	130	135	165	195	220	240	235	205	180	140	110	85	65	25	0	20	45	65	90	100	115	135
14	110	115	150	175	205	225	240	225	195	155	130	105	80	40	20	0	25	45	75	85	100	120
15	85	90	120	150	175	195	215	245	220	185	155	130	105	65	45	25	0	20	45	60	70	90
16	65	70	100	130	155	175	195	225	245	205	175	150	130	90	65	45	20	0	25	35	50	70
17	35	40	75	105	130	150	170	200	230	230	205	175	155	115	90	75	45	25	0	10	25	45
18	25	30	65	90	120	140	155	190	215	240	215	185	165	125	100	85	60	35	10	0	15	35
18A	10	15	50	80	105	125	145	175	205	240	230	200	180	140	115	100	70	50	25	15	0	20
19	25	30	60	90	115	135	155	185	215	255	250	220	200	160	135	120	90	70	45	35	20	0

Table 5-12: 3-axle Toll Rates for Year 2023-2024 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	5	50	85	120	145	170	210	245	295	310	275	245	195	165	140	110	80	45	35	15	30
1A	5	0	45	80	115	140	165	200	240	290	315	280	255	200	170	150	115	90	55	40	20	35
2	50	45	0	35	70	95	120	160	195	245	280	315	295	245	215	190	155	130	95	85	65	80
3	85	80	35	0	35	60	85	125	160	210	245	280	310	280	250	230	195	165	130	120	100	115
4	120	115	70	35	0	25	50	90	125	175	210	245	275	315	285	265	230	200	170	155	135	150
4A	145	140	95	60	25	0	25	65	100	150	185	220	250	300	310	290	255	225	195	180	160	175
5	170	165	120	85	50	25	0	40	75	125	160	195	225	275	305	310	275	250	215	205	185	200
6	210	200	160	125	90	65	40	0	35	85	120	155	185	235	265	290	315	290	255	240	225	240
7	245	240	195	160	125	100	75	35	0	50	85	120	150	200	230	250	285	315	295	280	260	275
8	295	290	245	210	175	150	125	85	50	0	35	70	100	150	180	200	235	265	295	310	310	325
9	310	315	280	245	210	185	160	120	85	35	0	35	65	115	145	165	200	225	260	275	295	320
10	275	280	315	280	245	220	195	155	120	70	35	0	30	80	110	130	165	195	230	240	260	285
11	245	255	295	310	275	250	225	185	150	100	65	30	0	50	80	105	140	165	200	215	230	255
12	195	200	245	280	315	300	275	235	200	150	115	80	50	0	30	55	85	115	150	160	180	205
13	165	170	215	250	285	310	305	265	230	180	145	110	80	30	0	25	55	85	120	130	150	175
14	140	150	190	230	265	290	310	290	250	200	165	130	105	55	25	0	35	60	95	110	125	155
15	110	115	155	195	230	255	275	315	285	235	200	165	140	85	55	35	0	25	60	75	95	120
16	80	90	130	165	200	225	250	290	315	265	225	195	165	115	85	60	25	0	35	50	65	90
17	45	55	95	130	170	195	215	255	295	295	260	230	200	150	120	95	60	35	0	15	30	60
18	35	40	85	120	155	180	205	240	280	310	275	240	215	160	130	110	75	50	15	0	20	45
18A	15	20	65	100	135	160	185	225	260	310	295	260	230	180	150	125	95	65	30	20	0	25
19	30	35	80	115	150	175	200	240	275	325	320	285	255	205	175	155	120	90	60	45	25	0

Table 5-13: 4 to 6 axle Toll Rates for Year 2023-2024 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	70	125	175	210	245	300	355	425	445	395	355	280	235	205	155	115	65	50	20	45
1A	10	0	60	115	165	200	235	290	345	415	455	405	365	290	245	215	165	125	80	60	30	55
2	70	60	0	50	100	140	175	230	285	355	405	455	425	350	310	275	225	190	140	120	95	115
3	125	115	50	0	50	85	120	180	230	305	355	405	445	405	360	325	280	240	190	170	145	165
4	175	165	100	50	0	35	70	125	180	250	305	350	395	455	410	380	330	290	240	220	195	215
4A	210	200	140	85	35	0	35	90	145	215	265	315	355	430	445	415	365	325	275	255	230	255
5	245	235	175	120	70	35	0	55	110	180	235	280	325	395	440	450	400	360	310	290	265	285
6	300	290	230	180	125	90	55	0	55	125	175	225	265	340	380	415	455	420	370	350	320	345
7	355	345	285	230	180	145	110	55	0	70	125	170	215	285	330	360	410	450	420	400	375	395
8	425	415	355	305	250	215	180	125	70	0	50	100	140	215	260	290	340	380	425	445	445	470
9	445	455	405	355	305	265	235	175	125	50	0	50	90	165	205	240	290	325	375	395	420	460
10	395	405	455	405	350	315	280	225	170	100	50	0	40	115	155	190	240	280	325	345	375	410
11	355	365	425	445	395	355	325	265	215	140	90	40	0	75	115	150	200	235	285	305	330	370
12	280	290	350	405	455	430	395	340	285	215	165	115	75	0	45	75	125	165	210	230	260	295
13	235	245	310	360	410	445	440	380	330	260	205	155	115	45	0	35	80	120	170	190	215	255
14	205	215	275	325	380	415	450	415	360	290	240	190	150	75	35	0	50	85	135	155	185	220
15	155	165	225	280	330	365	400	455	410	340	290	240	200	125	80	50	0	40	85	105	135	170
16	115	125	190	240	290	325	360	420	450	380	325	280	235	165	120	85	40	0	50	70	95	130
17	65	80	140	190	240	275	310	370	420	425	375	325	285	210	170	135	85	50	0	20	45	85
18	50	60	120	170	220	255	290	350	400	445	395	345	305	230	190	155	105	70	20	0	25	65
18A	20	30	95	145	195	230	265	320	375	445	420	375	330	260	215	185	135	95	45	25	0	35
19	45	55	115	165	215	255	285	345	395	470	460	410	370	295	255	220	170	130	85	65	35	0

Table 5-14: 7 & above axle Toll Rates for Year 2023-2024 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	85	150	210	255	295	365	430	520	540	480	430	340	290	250	190	140	80	60	25	55
1A	10	0	75	135	200	245	285	355	420	505	555	495	440	355	300	260	200	155	95	70	40	65
2	85	75	0	65	125	170	210	280	345	430	495	555	515	425	375	335	275	230	170	145	115	140
3	150	135	65	0	60	105	145	215	280	370	430	490	540	490	440	400	340	290	230	210	175	200
4	210	200	125	60	0	45	85	155	220	305	370	430	480	550	500	460	400	355	295	270	240	265
4A	255	245	170	105	45	0	40	110	175	265	325	385	435	525	545	505	445	400	335	315	280	310
5	295	285	210	145	85	40	0	70	135	220	285	345	395	485	535	545	485	440	380	355	325	350
6	365	355	280	215	155	110	70	0	65	150	215	275	325	415	465	505	555	510	450	425	390	420
7	430	420	345	280	220	175	135	65	0	85	150	210	260	350	400	440	500	545	515	490	455	485
8	520	505	430	370	305	265	220	150	85	0	60	120	170	260	315	355	415	460	520	545	545	570
9	540	555	495	430	370	325	285	215	150	60	0	60	110	200	250	290	350	400	460	480	515	560
10	480	495	555	490	430	385	345	275	210	120	60	0	50	140	190	230	290	340	400	420	455	500
11	430	440	515	540	480	435	395	325	260	170	110	50	0	90	140	180	240	290	350	370	405	450
12	340	355	425	490	550	525	485	415	350	260	200	140	90	0	50	90	150	200	260	285	315	360
13	290	300	375	440	500	545	535	465	400	315	250	190	140	50	0	40	100	145	205	230	265	305
14	250	260	335	400	460	505	545	505	440	355	290	230	180	90	40	0	60	105	165	190	220	265
15	190	200	275	340	400	445	485	555	500	415	350	290	240	150	100	60	0	45	105	130	160	205
16	140	155	230	290	355	400	440	510	545	460	400	340	290	200	145	105	45	0	60	85	115	160
17	80	95	170	230	295	335	380	450	515	520	460	400	350	260	205	165	105	60	0	25	55	100
18	60	70	145	210	270	315	355	425	490	545	480	420	370	285	230	190	130	85	25	0	30	75
18A	25	40	115	175	240	280	325	390	455	545	515	455	405	315	265	220	160	115	55	30	0	45
19	55	65	140	200	265	310	350	420	485	570	560	500	450	360	305	265	205	160	100	75	45	0

Single Journey

Table 5-15: Car/Jeep/Van Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	30	50	70	80	100	120	140	170	170	150	140	110	90	80	60	50	30	20	10	20
1A	10	0	20	40	60	80	90	110	130	160	180	160	140	110	100	80	60	50	30	20	10	20
2	30	20	0	20	40	50	70	90	110	140	160	180	170	140	120	110	90	70	50	50	40	40
3	50	40	20	0	20	30	50	70	90	120	140	160	170	160	140	130	110	90	70	70	60	60
4	70	60	40	20	0	10	30	50	70	100	120	140	150	180	160	150	130	110	90	90	80	80
4A	80	80	50	30	10	0	10	40	60	80	100	120	140	170	170	160	140	130	110	100	90	100
5	100	90	70	50	30	10	0	20	40	70	90	110	130	150	170	170	160	140	120	110	100	110
6	120	110	90	70	50	40	20	0	20	50	70	90	100	130	150	160	180	160	140	140	130	130
7	140	130	110	90	70	60	40	20	0	30	50	70	80	110	130	140	160	180	160	160	150	160
8	170	160	140	120	100	80	70	50	30	0	20	40	60	80	100	110	130	150	170	170	170	180
9	170	180	160	140	120	100	90	70	50	20	0	20	40	60	80	90	110	130	150	150	160	180
10	150	160	180	160	140	120	110	90	70	40	20	0	20	40	60	70	90	110	130	140	150	160
11	140	140	170	170	150	140	130	100	80	60	40	20	0	30	50	60	80	90	110	120	130	140
12	110	110	140	160	180	170	150	130	110	80	60	40	30	0	20	30	50	60	80	90	100	120
13	90	100	120	140	160	170	170	150	130	100	80	60	50	20	0	10	30	50	70	70	80	100
14	80	80	110	130	150	160	170	160	140	110	90	70	60	30	10	0	20	30	50	60	70	90
15	60	60	90	110	130	140	160	180	160	130	110	90	80	50	30	20	0	10	30	40	50	70
16	50	50	70	90	110	130	140	160	180	150	130	110	90	60	50	30	10	0	20	30	40	50
17	30	30	50	70	90	110	120	140	160	170	150	130	110	80	70	50	30	20	0	10	20	30
18	20	20	50	70	90	100	110	140	160	170	150	140	120	90	70	60	40	30	10	0	10	20
18A	10	10	40	60	80	90	100	130	150	170	160	150	130	100	80	70	50	40	20	10	0	10
19	20	20	40	60	80	100	110	130	160	180	180	160	140	120	100	90	70	50	30	20	10	0

Table 5-16: Minibus/LCV Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	40	80	110	130	150	190	220	270	280	250	220	180	150	130	100	70	40	30	10	30
1A	10	0	40	70	100	130	150	180	220	260	290	260	230	180	160	140	100	80	50	40	20	30
2	40	40	0	30	60	90	110	140	180	220	260	290	270	220	190	170	140	120	90	80	60	70
3	80	70	30	0	30	50	80	110	150	190	220	250	280	250	230	210	180	150	120	110	90	100
4	110	100	60	30	0	20	40	80	110	160	190	220	250	290	260	240	210	180	150	140	120	140
4A	130	130	90	50	20	0	20	60	90	140	170	200	230	270	280	260	230	210	170	160	150	160
5	150	150	110	80	40	20	0	40	70	110	150	180	200	250	280	280	250	230	200	180	170	180
6	190	180	140	110	80	60	40	0	30	80	110	140	170	210	240	260	290	260	230	220	200	220
7	220	220	180	150	110	90	70	30	0	40	80	110	130	180	210	230	260	280	270	250	240	250
8	270	260	220	190	160	140	110	80	40	0	30	60	90	140	160	180	210	240	270	280	280	300
9	280	290	260	220	190	170	150	110	80	30	0	30	60	100	130	150	180	210	240	250	270	290
10	250	260	290	250	220	200	180	140	110	60	30	0	30	70	100	120	150	180	210	220	240	260
11	220	230	270	280	250	230	200	170	130	90	60	30	0	50	70	90	130	150	180	190	210	230
12	180	180	220	250	290	270	250	210	180	140	100	70	50	0	30	50	80	100	130	150	160	190
13	150	160	190	230	260	280	280	240	210	160	130	100	70	30	0	20	50	80	110	120	140	160
14	130	140	170	210	240	260	280	260	230	180	150	120	90	50	20	0	30	60	90	100	120	140
15	100	100	140	180	210	230	250	290	260	210	180	150	130	80	50	30	0	20	60	70	80	110
16	70	80	120	150	180	210	230	260	280	240	210	180	150	100	80	60	20	0	30	40	60	80
17	40	50	90	120	150	170	200	230	270	270	240	210	180	130	110	90	60	30	0	10	30	50
18	30	40	80	110	140	160	180	220	250	280	250	220	190	150	120	100	70	40	10	0	20	40
18A	10	20	60	90	120	150	170	200	240	280	270	240	210	160	140	120	80	60	30	20	0	20
19	30	30	70	100	140	160	180	220	250	300	290	260	230	190	160	140	110	80	50	40	20	0

Table 5-17: Bus/2-axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	80	140	190	230	270	340	400	480	500	440	400	310	270	230	170	130	80	50	20	50
1A	10	0	70	130	180	220	260	330	380	460	510	450	410	320	280	240	180	140	90	60	40	60
2	80	70	0	60	110	150	190	260	320	400	450	510	470	390	350	310	250	210	160	130	100	130
3	140	130	60	0	60	100	140	200	260	340	400	450	500	450	400	370	310	270	210	190	160	190
4	190	180	110	60	0	40	80	140	200	280	340	390	440	510	460	420	370	330	270	250	220	240
4A	230	220	150	100	40	0	40	100	160	240	300	350	400	480	500	460	410	370	310	290	260	280
5	270	260	190	140	80	40	0	60	120	200	260	320	360	440	490	500	450	400	350	330	300	320
6	340	330	260	200	140	100	60	0	60	140	200	250	300	380	430	460	510	470	410	390	360	390
7	400	380	320	260	200	160	120	60	0	80	140	190	240	320	370	400	460	500	470	450	420	440
8	480	460	400	340	280	240	200	140	80	0	60	110	160	240	290	330	380	420	480	500	500	520
9	500	510	450	400	340	300	260	200	140	60	0	50	100	180	230	270	320	370	420	440	470	510
10	440	450	510	450	390	350	320	250	190	110	50	0	50	130	180	210	270	310	370	390	420	460
11	400	410	470	500	440	400	360	300	240	160	100	50	0	80	130	170	220	260	320	340	370	410
12	310	320	390	450	510	480	440	380	320	240	180	130	80	0	50	80	140	180	240	260	290	330
13	270	280	350	400	460	500	490	430	370	290	230	180	130	50	0	40	90	130	190	210	240	280
14	230	240	310	370	420	460	500	460	400	330	270	210	170	80	40	0	60	100	150	180	200	250
15	170	180	250	310	370	410	450	510	460	380	320	270	220	140	90	60	0	40	100	120	150	190
16	130	140	210	270	330	370	400	470	500	420	370	310	260	180	130	100	40	0	60	80	110	150
17	80	90	160	210	270	310	350	410	470	480	420	370	320	240	190	150	100	60	0	20	50	90
18	50	60	130	190	250	290	330	390	450	500	440	390	340	260	210	180	120	80	20	0	30	70
18A	20	40	100	160	220	260	300	360	420	500	470	420	370	290	240	200	150	110	50	30	0	40
19	50	60	130	190	240	280	320	390	440	520	510	460	410	330	280	250	190	150	90	70	40	0

Table 5-18: 3-axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	100	180	250	300	350	430	510	610	640	570	510	400	340	290	220	170	100	70	30	60
1A	10	0	90	160	240	290	340	420	500	600	650	580	520	420	360	310	240	180	110	80	50	80
2	100	90	0	70	150	200	250	330	410	510	580	650	610	510	440	400	330	270	200	170	130	170
3	180	160	70	0	70	130	170	260	330	440	510	580	640	580	520	470	400	350	270	250	210	240
4	250	240	150	70	0	50	100	180	260	360	440	510	570	650	590	540	470	420	350	320	280	310
4A	300	290	200	130	50	0	50	130	210	310	380	460	520	620	640	600	530	470	400	370	330	360
5	350	340	250	170	100	50	0	80	160	260	340	410	470	570	630	650	570	520	450	420	380	410
6	430	420	330	260	180	130	80	0	80	180	250	320	380	490	550	600	660	600	530	500	460	500
7	510	500	410	330	260	210	160	80	0	100	180	250	310	410	470	520	590	650	610	580	540	570
8	610	600	510	440	360	310	260	180	100	0	70	140	200	310	370	420	490	540	620	640	640	680
9	640	650	580	510	440	380	340	250	180	70	0	70	130	240	300	340	420	470	540	570	610	660
10	570	580	650	580	510	460	410	320	250	140	70	0	60	170	230	270	350	400	470	500	540	590
11	510	520	610	640	570	520	470	380	310	200	130	60	0	110	170	210	290	340	410	440	480	530
12	400	420	510	580	650	620	570	490	410	310	240	170	110	0	60	110	180	230	310	330	370	430
13	340	360	440	520	590	640	630	550	470	370	300	230	170	60	0	50	120	170	240	270	310	360
14	290	310	400	470	540	600	650	600	520	420	340	270	210	110	50	0	70	130	200	230	260	320
15	220	240	330	400	470	530	570	660	590	490	420	350	290	180	120	70	0	50	130	150	190	250
16	170	180	270	350	420	470	520	600	650	540	470	400	340	230	170	130	50	0	70	100	140	190
17	100	110	200	270	350	400	450	530	610	620	540	470	410	310	240	200	130	70	0	30	70	120
18	70	80	170	250	320	370	420	500	580	640	570	500	440	330	270	230	150	100	30	0	40	90
18A	30	50	130	210	280	330	380	460	540	640	610	540	480	370	310	260	190	140	70	40	0	50
19	60	80	170	240	310	360	410	500	570	680	660	590	530	430	360	320	250	190	120	90	50	0

Table 5-19: 4 to 6 axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	20	150	250	360	430	510	620	730	880	920	820	730	580	490	420	320	240	140	100	40	90
1A	20	0	130	230	340	410	480	600	710	860	940	840	750	600	510	440	340	260	160	120	70	110
2	150	130	0	110	210	290	360	480	590	730	840	940	880	730	640	570	470	390	290	250	190	240
3	250	230	110	0	110	180	250	370	480	630	730	830	920	830	750	680	580	500	390	350	300	340
4	360	340	210	110	0	70	150	260	370	520	630	730	810	940	850	780	680	600	500	460	400	450
4A	430	410	290	180	70	0	70	190	300	450	550	650	740	890	930	860	760	680	570	530	480	520
5	510	480	360	250	150	70	0	120	230	380	480	580	670	820	910	930	830	750	650	600	550	600
6	620	600	480	370	260	190	120	0	110	260	360	470	550	700	790	860	940	870	760	720	670	710
7	730	710	590	480	370	300	230	110	0	150	250	360	440	590	680	750	850	930	870	830	780	820
8	880	860	730	630	520	450	380	260	150	0	110	210	290	450	530	600	700	780	890	930	930	970
9	920	940	840	730	630	550	480	360	250	110	0	100	190	340	430	500	600	680	780	820	870	950
10	820	840	940	830	730	650	580	470	360	210	100	0	90	240	330	390	500	580	680	720	770	850
11	730	750	880	920	810	740	670	550	440	290	190	90	0	150	240	310	410	490	590	630	690	760
12	580	600	730	830	940	890	820	700	590	450	340	240	150	0	90	160	260	340	440	480	540	610
13	490	510	640	750	850	930	910	790	680	530	430	330	240	90	0	70	170	250	350	390	450	520
14	420	440	570	680	780	860	930	860	750	600	500	390	310	160	70	0	100	180	280	320	380	460
15	320	340	470	580	680	760	830	940	850	700	600	500	410	260	170	100	0	80	180	220	280	350
16	240	260	390	500	600	680	750	870	930	780	680	580	490	340	250	180	80	0	100	140	200	270
17	140	160	290	390	500	570	650	760	870	890	780	680	590	440	350	280	180	100	0	40	90	170
18	100	120	250	350	460	530	600	720	830	930	820	720	630	480	390	320	220	140	40	0	50	130
18A	40	70	190	300	400	480	550	670	780	930	870	770	690	540	450	380	280	200	90	50	0	80
19	90	110	240	340	450	520	600	710	820	970	950	850	760	610	520	460	350	270	170	130	80	0

Table 5-20: 7 & above axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	30	180	310	440	530	620	760	890	1070	1120	1000	890	710	600	520	390	290	170	120	50	110
1A	30	0	150	280	410	500	590	730	870	1050	1140	1020	920	730	620	540	420	320	200	150	80	140
2	180	150	0	130	260	350	440	580	710	890	1020	1150	1070	890	780	700	570	470	350	300	230	290
3	310	280	130	0	130	220	310	450	580	760	890	1020	1120	1020	910	830	700	600	480	430	360	420
4	440	410	260	130	0	90	180	320	450	630	760	890	990	1140	1040	950	830	730	610	560	490	550
4A	530	500	350	220	90	0	90	230	360	540	670	800	900	1090	1130	1040	920	820	700	650	580	640
5	620	590	440	310	180	90	0	140	280	460	590	710	820	1000	1110	1130	1010	910	790	740	670	720
6	760	730	580	450	320	230	140	0	130	310	440	570	670	860	960	1050	1150	1050	930	880	810	870
7	890	870	710	580	450	360	280	130	0	180	310	430	540	720	830	910	1040	1130	1060	1010	950	1000
8	1070	1050	890	760	630	540	460	310	180	0	130	250	360	540	650	730	860	950	1080	1130	1130	1180
9	1120	1140	1020	890	760	670	590	440	310	130	0	120	230	410	520	600	730	820	950	1000	1060	1160
10	1000	1020	1150	1020	890	800	710	570	430	250	120	0	100	290	400	480	600	700	830	870	940	1030
11	890	920	1070	1120	990	900	820	670	540	360	230	100	0	190	290	380	500	600	720	770	840	930
12	710	730	890	1020	1140	1090	1000	860	720	540	410	290	190	0	110	190	320	410	540	590	650	740
13	600	620	780	910	1040	1130	1110	960	830	650	520	400	290	110	0	80	210	300	430	480	540	640
14	520	540	700	830	950	1040	1130	1050	910	730	600	480	380	190	80	0	120	220	350	400	460	550
15	390	420	570	700	830	920	1010	1150	1040	860	730	600	500	320	210	120	0	100	220	270	340	430
16	290	320	470	600	730	820	910	1050	1130	950	820	700	600	410	300	220	100	0	120	170	240	330
17	170	200	350	480	610	700	790	930	1060	1080	950	830	720	540	430	350	220	120	0	50	120	210
18	120	150	300	430	560	650	740	880	1010	1130	1000	870	770	590	480	400	270	170	50	0	70	160
18A	50	80	230	360	490	580	670	810	950	1130	1060	940	840	650	540	460	340	240	120	70	0	90
19	110	140	290	420	550	640	720	870	1000	1180	1160	1030	930	740	640	550	430	330	210	160	90	0

Return Journey

Table 5-21: Car/Jeep/Van Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	5	15	25	35	40	50	60	70	85	85	75	70	55	45	40	30	25	15	10	5	10
1A	5	0	10	20	30	40	45	55	65	80	90	80	70	55	50	40	30	25	15	10	5	10
2	15	10	0	10	20	25	35	45	55	70	80	90	85	70	60	55	45	35	25	25	20	20
3	25	20	10	0	10	15	25	35	45	60	70	80	85	80	70	65	55	45	35	35	30	30
4	35	30	20	10	0	5	15	25	35	50	60	70	75	90	80	75	65	55	45	45	40	40
4A	40	40	25	15	5	0	5	20	30	40	50	60	70	85	85	80	70	65	55	50	45	50
5	50	45	35	25	15	5	0	10	20	35	45	55	65	75	85	85	80	70	60	55	50	55
6	60	55	45	35	25	20	10	0	10	25	35	45	50	65	75	80	90	80	70	70	65	65
7	70	65	55	45	35	30	20	10	0	15	25	35	40	55	65	70	80	90	80	80	75	80
8	85	80	70	60	50	40	35	25	15	0	10	20	30	40	50	55	65	75	85	85	85	90
9	85	90	80	70	60	50	45	35	25	10	0	10	20	30	40	45	55	65	75	75	80	90
10	75	80	90	80	70	60	55	45	35	20	10	0	10	20	30	35	45	55	65	70	75	80
11	70	70	85	85	75	70	65	50	40	30	20	10	0	15	25	30	40	45	55	60	65	70
12	55	55	70	80	90	85	75	65	55	40	30	20	15	0	10	15	25	30	40	45	50	60
13	45	50	60	70	80	85	85	75	65	50	40	30	25	10	0	5	15	25	35	35	40	50
14	40	40	55	65	75	80	85	80	70	55	45	35	30	15	5	0	10	15	25	30	35	45
15	30	30	45	55	65	70	80	90	80	65	55	45	40	25	15	10	0	5	15	20	25	35
16	25	25	35	45	55	65	70	80	90	75	65	55	45	30	25	15	5	0	10	15	20	25
17	15	15	25	35	45	55	60	70	80	85	75	65	55	40	35	25	15	10	0	5	10	15
18	10	10	25	35	45	50	55	70	80	85	75	70	60	45	35	30	20	15	5	0	5	10
18A	5	5	20	30	40	45	50	65	75	85	80	75	65	50	40	35	25	20	10	5	0	5
19	10	10	20	30	40	50	55	65	80	90	90	80	70	60	50	45	35	25	15	10	5	0

Table 5-22: Minibus/LCV Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	5	20	40	55	65	75	95	110	135	140	125	110	90	75	65	50	35	20	15	5	15
1A	5	0	20	35	50	65	75	90	110	130	145	130	115	90	80	70	50	40	25	20	10	15
2	20	20	0	15	30	45	55	70	90	110	130	145	135	110	95	85	70	60	45	40	30	35
3	40	35	15	0	15	25	40	55	75	95	110	125	140	125	115	105	90	75	60	55	45	50
4	55	50	30	15	0	10	20	40	55	80	95	110	125	145	130	120	105	90	75	70	60	70
4A	65	65	45	25	10	0	10	30	45	70	85	100	115	135	140	130	115	105	85	80	75	80
5	75	75	55	40	20	10	0	20	35	55	75	90	100	125	140	140	125	115	100	90	85	90
6	95	90	70	55	40	30	20	0	15	40	55	70	85	105	120	130	145	130	115	110	100	110
7	110	110	90	75	55	45	35	15	0	20	40	55	65	90	105	115	130	140	135	125	120	125
8	135	130	110	95	80	70	55	40	20	0	15	30	45	70	80	90	105	120	135	140	140	150
9	140	145	130	110	95	85	75	55	40	15	0	15	30	50	65	75	90	105	120	125	135	145
10	125	130	145	125	110	100	90	70	55	30	15	0	15	35	50	60	75	90	105	110	120	130
11	110	115	135	140	125	115	100	85	65	45	30	15	0	25	35	45	65	75	90	95	105	115
12	90	90	110	125	145	135	125	105	90	70	50	35	25	0	15	25	40	50	65	75	80	95
13	75	80	95	115	130	140	140	120	105	80	65	50	35	15	0	10	25	40	55	60	70	80
14	65	70	85	105	120	130	140	130	115	90	75	60	45	25	10	0	15	30	45	50	60	70
15	50	50	70	90	105	115	125	145	130	105	90	75	65	40	25	15	0	10	30	35	40	55
16	35	40	60	75	90	105	115	130	140	120	105	90	75	50	40	30	10	0	15	20	30	40
17	20	25	45	60	75	85	100	115	135	135	120	105	90	65	55	45	30	15	0	5	15	25
18	15	20	40	55	70	80	90	110	125	140	125	110	95	75	60	50	35	20	5	0	10	20
18A	5	10	30	45	60	75	85	100	120	140	135	120	105	80	70	60	40	30	15	10	0	10
19	15	15	35	50	70	80	90	110	125	150	145	130	115	95	80	70	55	40	25	20	10	0

Table 5-23: Bus/2-axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	5	40	70	95	115	135	170	200	240	250	220	200	155	135	115	85	65	40	25	10	25
1A	5	0	35	65	90	110	130	165	190	230	255	225	205	160	140	120	90	70	45	30	20	30
2	40	35	0	30	55	75	95	130	160	200	225	255	235	195	175	155	125	105	80	65	50	65
3	70	65	30	0	30	50	70	100	130	170	200	225	250	225	200	185	155	135	105	95	80	95
4	95	90	55	30	0	20	40	70	100	140	170	195	220	255	230	210	185	165	135	125	110	120
4A	115	110	75	50	20	0	20	50	80	120	150	175	200	240	250	230	205	185	155	145	130	140
5	135	130	95	70	40	20	0	30	60	100	130	160	180	220	245	250	225	200	175	165	150	160
6	170	165	130	100	70	50	30	0	30	70	100	125	150	190	215	230	255	235	205	195	180	195
7	200	190	160	130	100	80	60	30	0	40	70	95	120	160	185	200	230	250	235	225	210	220
8	240	230	200	170	140	120	100	70	40	0	30	55	80	120	145	165	190	210	240	250	250	260
9	250	255	225	200	170	150	130	100	70	30	0	25	50	90	115	135	160	185	210	220	235	255
10	220	225	255	225	195	175	160	125	95	55	25	0	25	65	90	105	135	155	185	195	210	230
11	200	205	235	250	220	200	180	150	120	80	50	25	0	40	65	85	110	130	160	170	185	205
12	155	160	195	225	255	240	220	190	160	120	90	65	40	0	25	40	70	90	120	130	145	165
13	135	140	175	200	230	250	245	215	185	145	115	90	65	25	0	20	45	65	95	105	120	140
14	115	120	155	185	210	230	250	230	200	165	135	105	85	40	20	0	30	50	75	90	100	125
15	85	90	125	155	185	205	225	255	230	190	160	135	110	70	45	30	0	20	50	60	75	95
16	65	70	105	135	165	185	200	235	250	210	185	155	130	90	65	50	20	0	30	40	55	75
17	40	45	80	105	135	155	175	205	235	240	210	185	160	120	95	75	50	30	0	10	25	45
18	25	30	65	95	125	145	165	195	225	250	220	195	170	130	105	90	60	40	10	0	15	35
18A	10	20	50	80	110	130	150	180	210	250	235	210	185	145	120	100	75	55	25	15	0	20
19	25	30	65	95	120	140	160	195	220	260	255	230	205	165	140	125	95	75	45	35	20	0

Table 5-24: 3-axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	5	50	90	125	150	175	215	255	305	320	285	255	200	170	145	110	85	50	35	15	30
1A	5	0	45	80	120	145	170	210	250	300	325	290	260	210	180	155	120	90	55	40	25	40
2	50	45	0	35	75	100	125	165	205	255	290	325	305	255	220	200	165	135	100	85	65	85
3	90	80	35	0	35	65	85	130	165	220	255	290	320	290	260	235	200	175	135	125	105	120
4	125	120	75	35	0	25	50	90	130	180	220	255	285	325	295	270	235	210	175	160	140	155
4A	150	145	100	65	25	0	25	65	105	155	190	230	260	310	320	300	265	235	200	185	165	180
5	175	170	125	85	50	25	0	40	80	130	170	205	235	285	315	325	285	260	225	210	190	205
6	215	210	165	130	90	65	40	0	40	90	125	160	190	245	275	300	330	300	265	250	230	250
7	255	250	205	165	130	105	80	40	0	50	90	125	155	205	235	260	295	325	305	290	270	285
8	305	300	255	220	180	155	130	90	50	0	35	70	100	155	185	210	245	270	310	320	320	340
9	320	325	290	255	220	190	170	125	90	35	0	35	65	120	150	170	210	235	270	285	305	330
10	285	290	325	290	255	230	205	160	125	70	35	0	30	85	115	135	175	200	235	250	270	295
11	255	260	305	320	285	260	235	190	155	100	65	30	0	55	85	105	145	170	205	220	240	265
12	200	210	255	290	325	310	285	245	205	155	120	85	55	0	30	55	90	115	155	165	185	215
13	170	180	220	260	295	320	315	275	235	185	150	115	85	30	0	25	60	85	120	135	155	180
14	145	155	200	235	270	300	325	300	260	210	170	135	105	55	25	0	35	65	100	115	130	160
15	110	120	165	200	235	265	285	330	295	245	210	175	145	90	60	35	0	25	65	75	95	125
16	85	90	135	175	210	235	260	300	325	270	235	200	170	115	85	65	25	0	35	50	70	95
17	50	55	100	135	175	200	225	265	305	310	270	235	205	155	120	100	65	35	0	15	35	60
18	35	40	85	125	160	185	210	250	290	320	285	250	220	165	135	115	75	50	15	0	20	45
18A	15	25	65	105	140	165	190	230	270	320	305	270	240	185	155	130	95	70	35	20	0	25
19	30	40	85	120	155	180	205	250	285	340	330	295	265	215	180	160	125	95	60	45	25	0

Table 5-25: 4 to 6 axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	75	125	180	215	255	310	365	440	460	410	365	290	245	210	160	120	70	50	20	45
1A	10	0	65	115	170	205	240	300	355	430	470	420	375	300	255	220	170	130	80	60	35	55
2	75	65	0	55	105	145	180	240	295	365	420	470	440	365	320	285	235	195	145	125	95	120
3	125	115	55	0	55	90	125	185	240	315	365	415	460	415	375	340	290	250	195	175	150	170
4	180	170	105	55	0	35	75	130	185	260	315	365	405	470	425	390	340	300	250	230	200	225
4A	215	205	145	90	35	0	35	95	150	225	275	325	370	445	465	430	380	340	285	265	240	260
5	255	240	180	125	75	35	0	60	115	190	240	290	335	410	455	465	415	375	325	300	275	300
6	310	300	240	185	130	95	60	0	55	130	180	235	275	350	395	430	470	435	380	360	335	355
7	365	355	295	240	185	150	115	55	0	75	125	180	220	295	340	375	425	465	435	415	390	410
8	440	430	365	315	260	225	190	130	75	0	55	105	145	225	265	300	350	390	445	465	465	485
9	460	470	420	365	315	275	240	180	125	55	0	50	95	170	215	250	300	340	390	410	435	475
10	410	420	470	415	365	325	290	235	180	105	50	0	45	120	165	195	250	290	340	360	385	425
11	365	375	440	460	405	370	335	275	220	145	95	45	0	75	120	155	205	245	295	315	345	380
12	290	300	365	415	470	445	410	350	295	225	170	120	75	0	45	80	130	170	220	240	270	305
13	245	255	320	375	425	465	455	395	340	265	215	165	120	45	0	35	85	125	175	195	225	260
14	210	220	285	340	390	430	465	430	375	300	250	195	155	80	35	0	50	90	140	160	190	230
15	160	170	235	290	340	380	415	470	425	350	300	250	205	130	85	50	0	40	90	110	140	175
16	120	130	195	250	300	340	375	435	465	390	340	290	245	170	125	90	40	0	50	70	100	135
17	70	80	145	195	250	285	325	380	435	445	390	340	295	220	175	140	90	50	0	20	45	85
18	50	60	125	175	230	265	300	360	415	465	410	360	315	240	195	160	110	70	20	0	25	65
18A	20	35	95	150	200	240	275	335	390	465	435	385	345	270	225	190	140	100	45	25	0	40
19	45	55	120	170	225	260	300	355	410	485	475	425	380	305	260	230	175	135	85	65	40	0

Table 5-26: 7 & above axle Toll Rates for Year 2024-2025 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	15	90	155	220	265	310	380	445	535	560	500	445	355	300	260	195	145	85	60	25	55
1A	15	0	75	140	205	250	295	365	435	525	570	510	460	365	310	270	210	160	100	75	40	70
2	90	75	0	65	130	175	220	290	355	445	510	575	535	445	390	350	285	235	175	150	115	145
3	155	140	65	0	65	110	155	225	290	380	445	510	560	510	455	415	350	300	240	215	180	210
4	220	205	130	65	0	45	90	160	225	315	380	445	495	570	520	475	415	365	305	280	245	275
4A	265	250	175	110	45	0	45	115	180	270	335	400	450	545	565	520	460	410	350	325	290	320
5	310	295	220	155	90	45	0	70	140	230	295	355	410	500	555	565	505	455	395	370	335	360
6	380	365	290	225	160	115	70	0	65	155	220	285	335	430	480	525	575	525	465	440	405	435
7	445	435	355	290	225	180	140	65	0	90	155	215	270	360	415	455	520	565	530	505	475	500
8	535	525	445	380	315	270	230	155	90	0	65	125	180	270	325	365	430	475	540	565	565	590
9	560	570	510	445	380	335	295	220	155	65	0	60	115	205	260	300	365	410	475	500	530	580
10	500	510	575	510	445	400	355	285	215	125	60	0	50	145	200	240	300	350	415	435	470	515
11	445	460	535	560	495	450	410	335	270	180	115	50	0	95	145	190	250	300	360	385	420	465
12	355	365	445	510	570	545	500	430	360	270	205	145	95	0	55	95	160	205	270	295	325	370
13	300	310	390	455	520	565	555	480	415	325	260	200	145	55	0	40	105	150	215	240	270	320
14	260	270	350	415	475	520	565	525	455	365	300	240	190	95	40	0	60	110	175	200	230	275
15	195	210	285	350	415	460	505	575	520	430	365	300	250	160	105	60	0	50	110	135	170	215
16	145	160	235	300	365	410	455	525	565	475	410	350	300	205	150	110	50	0	60	85	120	165
17	85	100	175	240	305	350	395	465	530	540	475	415	360	270	215	175	110	60	0	25	60	105
18	60	75	150	215	280	325	370	440	505	565	500	435	385	295	240	200	135	85	25	0	35	80
18A	25	40	115	180	245	290	335	405	475	565	530	470	420	325	270	230	170	120	60	35	0	45
19	55	70	145	210	275	320	360	435	500	590	580	515	465	370	320	275	215	165	105	80	45	0

Above rates are applicable for year 2024-25 (Updating WPI). Toll rates for future years have been worked out as per applicable rate revision policy. These rates have been used for calculating revenue of future years.

5.2 Traffic Forecast

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Traffic of horizon years has been worked out on the basis of growth as discussed previously. Traffic forecast of total volume (all category) is given in tables below.

Table 5-27: Total Tollable Traffic (Pessimistic Growth Scenario)

Year/ Types of vehicles	Car/Jeep/Van	Minibus /LCV	Bus/ 2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Tollable Traffic (No.)	PCU (Including Exempted)
2024-25	179718	9002	9639	6973	12537	5	**217874**	**299496**
2025-26	191946	9388	9904	7226	13019	5	**231488**	**316026**
2026-27	204996	9786	10177	7493	13520	5	**245977**	**333548**
2027-28	218956	10199	10461	7766	14041	5	**261428**	**352143**
2028-29	230834	10597	10652	7967	14429	5	**274484**	**367540**
2029-30	243336	11009	10846	8172	14823	5	**288191**	**383630**
2030-31	256520	11442	11043	8381	15224	5	**302615**	**400486**
2031-32	270453	11889	11241	8596	15637	5	**317821**	**418187**
2032-33	285111	12354	11442	8814	16060	5	**333786**	**436703**
2033-34	295461	12801	11549	8935	16298	5	**345049**	**449478**
2034-35	306193	13255	11656	9057	16539	5	**356705**	**462663**
2035-36	317307	13723	11763	9181	16782	5	**368761**	**476265**
2036-37	328815	14212	11870	9309	17028	5	**381239**	**490319**
2037-38	340746	14717	11978	9437	17281	5	**394164**	**504854**

Year/ Types of vehicles	Car/Jeep/Van	Minibus /LCV	Bus/ 2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Tollable Traffic (No.)	PCU (Including Exempted)
2038-39	350191	15193	12040	9513	17432	5	**404374**	**516106**
2039-40	359898	15682	12102	9589	17583	5	**414859**	**527640**
2040-41	369873	16189	12164	9665	17734	5	**425630**	**539469**
2041-42	380132	16705	12226	9741	17886	5	**436695**	**551600**
2042-43	390659	17245	12288	9817	18039	5	**448053**	**564040**
2043-44	398537	17750	12311	9855	18120	5	**456578**	**573223**
2044-45	406568	18262	12334	9893	18201	5	**465263**	**582569**
2045-46	414765	18784	12357	9931	18282	5	**474124**	**592097**
2046-47	423118	19325	12380	9969	18363	5	**483160**	**601809**
2047-48	431644	19887	12403	10007	18444	5	**492390**	**611725**
2048-49	437539	20402	12403	10011	18453	5	**498813**	**618445**
2049-50	443513	20923	12403	10015	18462	5	**505321**	**625253**
2050-51	449574	21462	12403	10019	18471	5	**511934**	**632175**
2051-52	455717	22014	12403	10023	18480	5	**518642**	**639199**
2052-53	461937	22578	12403	10027	18489	5	**525439**	**646317**
2053-54	467833	23149	12403	10031	18498	5	**531919**	**653122**

Table 5-28: Total Tollable Traffic (Most likely Growth Scenario)

Year/ Types of vehicles	Car/Jeep/Van	Minibus /LCV	Bus/ 2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Tollable Traffic (No.)	PCU (Including Exempted)
2024-25	180153	9017	9669	6993	12566	5	**218403**	**300234**
2025-26	192859	9422	9961	7272	13083	5	**232602**	**317587**
2026-27	206466	9846	10261	7556	13620	5	**247754**	**335999**
2027-28	221028	10291	10570	7847	14180	5	**263921**	**355548**
2028-29	233557	10719	10791	8070	14606	5	**277748**	**371968**

Year/ Types of vehicles	Car/Jeep/Van	Minibus /LCV	Bus/ 2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Tollable Traffic (No.)	PCU (Including Exempted)
2029-30	246808	11164	11018	8295	15040	5	**292330**	**389196**
2030-31	260806	11619	11249	8529	15481	5	**307689**	**407256**
2031-32	275601	12097	11481	8772	15932	5	**323888**	**426222**
2032-33	291231	12597	11719	9017	16393	5	**340962**	**446126**
2033-34	302529	13075	11859	9168	16685	5	**353321**	**460328**
2034-35	314282	13571	12004	9319	16979	5	**366160**	**475036**
2035-36	326474	14078	12150	9471	17278	5	**379456**	**490228**
2036-37	339135	14609	12297	9626	17585	5	**393257**	**505973**
2037-38	352296	15166	12445	9786	17896	5	**407594**	**522293**
2038-39	362941	15687	12539	9892	18106	5	**419170**	**535264**
2039-40	373903	16227	12633	9999	18320	5	**431087**	**548602**
2040-41	385192	16787	12728	10106	18536	5	**443354**	**562309**
2041-42	396825	17364	12823	10213	18754	5	**455984**	**576395**
2042-43	408805	17966	12920	10321	18975	5	**468992**	**590887**
2043-44	418069	18534	12974	10385	19102	5	**479069**	**601929**
2044-45	427534	19111	13028	10450	19230	5	**489358**	**613192**
2045-46	437211	19712	13083	10515	19359	5	**499885**	**624711**
2046-47	447122	20326	13138	10580	19488	5	**510659**	**636484**
2047-48	457252	20972	13193	10645	19617	5	**521684**	**648523**
2048-49	464635	21568	13210	10666	19672	5	**529756**	**657162**
2049-50	472136	22175	13227	10687	19727	5	**537957**	**665935**
2050-51	479764	22791	13244	10708	19783	5	**546295**	**674853**
2051-52	487501	23439	13261	10729	19839	5	**554774**	**683928**
2052-53	495370	24099	13278	10750	19895	5	**563397**	**693153**
2053-54	502843	24780	13295	10771	19951	5	**571645**	**702013**

Table 5-29: Total Tollable Traffic (Optimistic Growth Scenario)

Year/ Types of vehicles	Car/Jeep/Van	Minibus /LCV	Bus/ 2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Tollable Traffic (No.)	PCU (Including Exempted)
2024-25	180567	9041	9684	7008	12604	5	**218909**	**300945**
2025-26	193765	9476	9997	7300	13164	5	**233707**	**319131**
2026-27	207922	9931	10314	7602	13742	5	**249516**	**338428**
2027-28	223113	10402	10641	7919	14344	5	**266424**	**358967**
2028-29	236325	10861	10894	8171	14800	5	**281056**	**376434**
2029-30	250323	11336	11151	8428	15268	5	**296511**	**394793**
2030-31	265149	11836	11420	8690	15752	5	**312852**	**414140**
2031-32	280853	12352	11692	8959	16246	5	**330107**	**434464**
2032-33	297490	12894	11972	9237	16761	5	**348359**	**455905**
2033-34	309780	13413	12147	9423	17113	5	**361881**	**471641**
2034-35	322579	13955	12324	9610	17470	5	**375943**	**487951**
2035-36	335893	14518	12505	9801	17832	5	**390554**	**504855**
2036-37	349788	15107	12690	9994	18206	5	**405790**	**522450**
2037-38	364230	15721	12876	10189	18586	5	**421607**	**540666**
2038-39	376145	16308	13010	10333	18858	5	**434659**	**555520**
2039-40	388442	16921	13146	10480	19132	5	**448126**	**570818**
2040-41	401153	17548	13285	10628	19410	5	**462029**	**586582**
2041-42	414284	18207	13425	10779	19689	5	**476389**	**602830**
2042-43	427823	18902	13569	10930	19971	5	**491200**	**619565**
2043-44	438585	19553	13661	11016	20148	5	**502968**	**632634**
2044-45	449619	20218	13753	11105	20326	5	**515026**	**646010**
2045-46	460925	20917	13845	11195	20506	5	**527393**	**659720**
2046-47	472524	21637	13937	11286	20687	5	**540076**	**673763**
2047-48	484418	22381	14030	11377	20868	5	**553079**	**688139**
2048-49	493458	23081	14081	11425	20973	5	**563023**	**698999**
2049-50	502653	23801	14132	11474	21080	5	**573145**	**710055**
2050-51	512037	24542	14183	11524	21187	5	**583478**	**721335**

Year/ Types of vehicles	Car/Jeep/Van	Minibus /LCV	Bus/ 2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Tollable Traffic (No.)	PCU (Including Exempted)
2051-52	521584	25305	14235	11574	21294	5	**593997**	**732814**
2052-53	531303	26093	14287	11624	21401	5	**604713**	**744503**
2053-54	540550	26898	14339	11674	21509	5	**614975**	**755749**

5.2 Toll Revenue at all toll plazas

Toll revenue has been worked out for concession period as per projected traffic and worked out rates.

5.4 Revenue Forecast

Revenue forecast with traffic numbers as per above analysis and rates worked out is given in following table.

Table 5-30: Total Toll Revenue – Rs. Cr (Pessimistic)

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2023-24	18.98	0.00	10.88	85.68	10.96	5.27	32.26	83.34	33.08	13.22	37.25	5.94	88.83	22.31	4.96	23.68	18.22	103.32	17.09	19.93	6.02	59.67	**700.88**
2024-25	21.14	0.00	11.74	92.23	11.83	5.87	34.80	89.28	35.72	14.40	40.63	6.47	96.13	24.12	5.30	25.72	19.71	111.34	18.15	21.60	6.54	64.46	**757.19**
2025-26	23.17	0.00	13.32	102.06	13.04	6.64	38.85	97.75	40.17	16.01	45.54	7.08	106.01	26.93	5.83	28.57	21.85	122.53	20.52	25.56	7.28	73.60	**842.30**
2026-27	25.51	0.00	14.64	112.27	14.77	7.34	42.82	108.44	44.32	17.55	50.05	7.85	117.30	29.66	6.45	31.98	24.28	138.84	22.93	27.90	7.98	85.94	**938.80**
2027-28	28.33	0.00	16.41	126.11	16.31	8.31	48.21	120.59	49.68	19.84	56.15	8.64	130.89	34.08	7.35	35.88	27.02	152.61	25.58	30.97	8.81	95.24	**1,047.02**
2028-29	31.85	0.00	18.64	137.72	18.07	9.20	53.10	132.45	54.82	21.99	62.48	9.43	143.84	37.41	7.92	39.46	29.42	171.90	27.58	33.52	10.13	107.98	**1,158.91**
2029-30	34.70	0.00	20.37	152.03	20.20	10.32	58.62	144.99	60.65	24.23	69.34	10.60	158.29	41.27	8.65	44.22	32.67	186.33	30.44	37.22	11.10	116.33	**1,272.57**
2030-31	38.96	0.00	22.80	167.56	22.24	11.31	64.72	159.30	67.17	26.73	76.82	11.70	175.36	45.28	9.66	47.74	35.90	202.68	34.63	43.33	12.41	130.69	**1,407.00**
2031-32	43.21	0.00	25.08	184.45	24.79	12.54	71.76	175.23	74.89	29.41	84.77	12.73	193.13	50.84	10.69	53.08	39.22	227.70	37.32	47.13	14.39	150.03	**1,562.37**
2032-33	47.71	0.00	27.97	203.21	27.10	13.96	79.23	192.02	82.25	32.76	94.40	14.06	212.08	56.58	11.82	59.53	43.33	246.53	41.10	51.41	15.66	163.34	**1,716.02**
2033-34	52.63	0.00	30.54	220.77	29.97	15.36	86.38	208.93	89.93	35.81	102.91	15.39	232.07	61.54	12.92	65.09	47.01	273.99	46.09	56.06	16.72	182.18	**1,882.31**
2034-35	56.95	0.00	33.25	242.32	32.86	16.77	94.94	227.84	98.84	39.25	113.13	16.76	251.86	67.15	14.09	71.21	51.64	294.51	50.04	63.20	18.85	198.54	**2,053.99**

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2035-36	62.87	0.00	36.89	264.65	36.00	18.54	103.71	247.74	107.75	43.13	123.95	18.38	276.02	74.51	15.38	78.75	56.31	325.21	55.45	69.35	20.60	220.75	2,255.94
2036-37	70.86	0.00	39.98	288.88	39.43	20.34	113.79	269.78	118.31	47.53	135.45	19.87	300.64	80.43	16.97	86.02	61.26	359.68	61.41	75.46	22.91	245.49	2,474.48
2037-38	76.51	0.00	43.92	313.79	42.87	22.42	124.86	293.31	130.98	51.63	148.63	21.87	329.56	88.81	18.53	94.65	66.69	385.96	66.50	80.93	24.73	263.65	2,690.80
2038-39	83.09	0.00	48.37	340.04	47.27	24.20	135.58	318.73	141.21	56.61	162.01	23.80	357.21	96.54	20.20	102.65	72.99	421.79	72.65	90.12	27.19	292.29	2,934.54
2039-40	91.46	0.00	52.46	370.80	51.52	26.62	148.25	346.67	154.43	61.49	177.21	25.85	389.78	104.67	22.14	112.63	79.12	463.07	78.90	98.26	29.73	321.04	3,206.09
2040-41	99.77	0.00	57.15	401.97	55.50	29.20	161.42	374.93	169.21	67.17	193.42	27.94	422.85	114.64	24.24	122.06	85.49	501.36	85.55	108.33	32.46	355.73	3,490.38
2041-42	108.87	0.00	62.69	437.73	60.85	31.80	175.58	406.43	182.60	73.22	210.75	30.55	459.98	125.16	26.49	134.53	93.05	547.98	93.50	116.65	35.80	387.98	3,802.19
2042-43	118.91	0.00	68.34	475.98	66.33	34.93	191.75	442.10	200.21	79.99	230.31	33.37	501.27	137.06	29.03	146.69	101.65	597.63	101.67	129.44	39.46	427.86	4,153.98
2043-44	130.48	0.00	74.56	517.08	72.58	38.30	208.60	479.85	218.49	87.30	250.61	36.11	544.90	148.96	31.71	158.64	110.02	647.56	112.56	140.03	42.33	465.68	4,516.36
2044-45	140.85	0.00	80.51	556.74	78.85	41.66	226.12	518.10	236.40	94.51	271.63	39.37	588.46	161.39	34.20	171.89	118.87	699.37	119.32	154.49	46.05	504.07	4,882.84
2045-46	152.47	0.00	88.25	603.80	85.69	45.35	245.55	560.46	257.20	102.79	295.23	42.46	636.67	175.65	36.94	188.33	129.39	765.49	130.63	163.73	50.35	553.65	5,310.10
2046-47	168.36	0.00	94.91	653.01	93.21	49.28	267.03	605.68	279.94	111.76	319.74	46.40	691.07	191.33	40.32	204.92	140.41	827.36	142.33	180.51	54.73	603.25	5,765.56
2047-48	181.88	0.00	104.43	710.77	102.23	54.32	292.17	659.57	305.78	122.05	349.55	50.33	750.48	208.97	44.14	223.35	152.30	906.60	154.47	197.86	59.91	664.43	6,295.60
2048-49	197.13	0.00	112.59	764.76	109.89	58.50	314.47	709.59	329.73	131.51	378.48	54.49	809.39	225.51	47.66	241.62	164.73	970.94	168.54	212.24	64.55	711.20	6,777.51
2049-50	214.69	0.00	121.59	827.83	119.19	63.39	341.56	765.39	357.79	142.78	409.72	59.24	873.95	244.34	51.49	262.11	177.63	1053.73	181.92	230.20	71.06	777.45	7,347.05
2050-51	232.44	0.00	132.19	894.08	129.98	68.72	368.41	826.82	387.38	154.75	443.08	63.83	944.37	264.72	56.02	283.50	192.43	1141.13	197.24	250.44	76.74	843.64	7,951.89
2051-52	253.24	0.00	144.10	969.01	140.77	75.44	400.82	897.59	422.69	168.40	481.33	69.64	1024.77	288.55	61.09	308.78	208.84	1237.07	215.16	272.26	82.97	921.51	8,644.04
2052-53	274.55	0.00	155.70	1044.59	152.40	81.27	432.98	966.03	457.22	181.52	521.48	75.13	1104.40	310.85	65.98	333.88	225.03	1333.36	232.94	295.76	90.16	997.48	9,332.71
2053-54	296.73	0.00	168.90	1129.63	165.22	88.33	469.74	1042.90	495.15	197.39	564.52	81.54	1195.44	338.68	71.83	363.83	243.64	1440.25	252.02	319.02	98.67	1079.67	10103.10

Table 5-31: Total Toll Revenue – Rs. Cr (Most Likely)

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2023-24	18.98	0.00	10.88	85.68	10.96	5.27	32.26	83.34	33.08	13.22	37.25	5.94	88.83	22.31	4.96	23.68	18.22	103.32	17.09	19.93	6.02	59.67	700.88
2024-25	21.18	0.00	11.78	92.39	11.85	5.89	34.88	89.48	35.82	14.44	40.75	6.49	96.32	24.16	5.31	25.77	19.76	111.57	18.18	21.64	6.56	64.60	758.82
2025-26	23.25	0.00	13.40	102.57	13.07	6.69	39.05	98.16	40.37	16.08	45.77	7.11	106.44	27.06	5.85	28.71	21.96	123.00	20.60	25.66	7.32	73.91	846.02
2026-27	25.64	0.00	14.78	113.12	14.84	7.40	43.13	109.17	44.66	17.65	50.46	7.89	118.08	29.87	6.47	32.24	24.44	139.61	23.07	28.06	8.04	86.51	945.12
2027-28	28.55	0.00	16.63	127.35	16.41	8.39	48.67	121.67	50.19	20.00	56.72	8.69	132.09	34.38	7.39	36.30	27.25	153.85	25.81	31.23	8.89	96.08	1,056.53
2028-29	32.16	0.00	18.90	139.39	18.22	9.30	53.69	133.97	55.52	22.22	63.28	9.51	145.46	37.84	7.98	40.01	29.78	173.77	27.87	33.86	10.24	109.17	1,172.15
2029-30	35.17	0.00	20.70	154.28	20.39	10.47	59.40	146.96	61.59	24.56	70.39	10.72	160.44	41.85	8.75	44.94	33.15	188.85	30.83	37.69	11.25	117.89	1,290.28
2030-31	39.60	0.00	23.22	170.51	22.52	11.48	65.76	161.85	68.39	27.17	78.15	11.85	178.11	46.00	9.79	48.65	36.53	205.94	35.13	43.96	12.59	132.75	1,429.94

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2031-32	44.02	0.00	25.57	188.15	25.12	12.75	73.08	178.51	76.44	29.97	86.38	12.91	196.52	51.78	10.88	54.20	39.97	231.84	37.94	47.91	14.64	152.74	1,591.31
2032-33	48.72	0.00	28.55	207.77	27.53	14.23	80.91	196.08	84.15	33.41	96.41	14.27	216.29	57.77	12.07	60.94	44.25	251.72	41.89	52.37	15.95	166.68	1,751.96
2033-34	53.89	0.00	31.25	226.24	30.61	15.70	88.42	213.95	92.17	36.62	105.30	15.64	237.20	62.96	13.21	66.80	48.13	280.44	47.09	57.28	17.05	186.35	1,926.32
2034-35	58.41	0.00	34.14	248.80	33.71	17.19	97.35	233.94	101.49	40.24	116.00	17.07	258.10	68.87	14.42	73.25	53.03	302.25	51.24	64.81	19.26	203.59	2,107.14
2035-36	64.59	0.00	38.00	272.27	37.13	19.07	106.58	255.05	110.85	44.33	127.33	18.75	283.64	76.61	15.74	81.18	57.99	334.56	56.89	71.35	21.09	226.95	2,319.96
2036-37	72.94	0.00	41.27	297.82	40.87	21.02	117.20	278.52	121.92	48.99	139.40	20.31	309.71	82.97	17.39	88.84	63.29	370.88	63.16	77.86	23.53	253.01	2,550.89
2037-38	78.93	0.00	45.43	324.26	44.64	23.27	128.91	303.61	135.22	53.38	153.26	22.40	340.34	91.96	19.02	97.95	69.14	398.82	68.57	83.75	25.46	272.40	2,780.70
2038-39	85.98	0.00	50.16	352.29	49.34	25.17	140.32	330.68	146.20	58.62	167.43	24.43	369.95	100.13	20.77	106.55	75.84	436.75	75.15	93.45	28.06	302.78	3,040.07
2039-40	94.89	0.00	54.53	385.10	53.88	27.74	153.81	360.58	160.33	63.81	183.58	26.62	404.82	108.76	22.80	117.30	82.41	480.56	81.88	102.11	30.78	333.44	3,329.73
2040-41	103.80	0.00	59.55	418.53	58.16	30.46	167.86	390.90	176.16	69.83	200.90	28.84	440.29	119.36	24.99	127.48	89.22	521.40	89.07	112.80	33.70	370.45	3,633.75
2041-42	113.59	0.00	65.51	456.87	63.86	33.24	183.03	424.70	190.64	76.26	219.45	31.59	480.18	130.58	27.34	140.98	97.27	571.17	97.61	121.70	37.22	405.06	3,967.86
2042-43	124.37	0.00	71.62	498.02	69.71	36.57	200.33	463.07	209.62	83.48	240.43	34.55	524.68	143.29	30.01	154.18	106.38	624.27	106.46	135.34	41.10	447.84	4,345.32
2043-44	136.78	0.00	78.31	542.38	76.39	40.21	218.50	503.60	229.09	91.36	262.32	37.42	571.73	156.11	32.88	167.04	115.37	677.89	118.04	146.81	44.17	488.58	4,734.99
2044-45	147.97	0.00	84.72	585.41	83.11	43.80	237.47	544.88	248.31	99.17	285.08	40.87	618.88	169.51	35.55	181.35	124.90	733.72	125.35	162.39	48.15	530.10	5,130.70
2045-46	160.56	0.00	93.05	636.55	90.45	47.75	258.56	590.89	270.63	108.19	310.74	44.14	671.24	184.95	38.51	199.07	136.19	804.94	137.50	172.58	52.76	583.59	5,592.86
2046-47	177.72	0.00	100.28	690.24	98.59	52.01	281.95	640.11	295.20	117.96	337.50	48.32	730.29	201.98	42.15	217.02	148.04	871.95	150.11	190.78	57.45	637.33	6,086.96
2047-48	192.46	0.00	110.53	753.31	108.38	57.45	309.29	698.78	323.13	129.14	370.11	52.51	794.91	221.12	46.28	237.03	160.79	957.54	163.26	209.68	63.00	703.57	6,662.27
2048-49	209.10	0.00	119.51	812.61	116.71	62.04	333.75	753.55	349.23	139.44	401.52	56.97	859.56	239.10	50.09	256.98	174.27	1027.87	178.59	225.34	68.06	754.97	7,189.28
2049-50	228.20	0.00	129.43	881.85	126.82	67.41	363.38	814.72	379.86	151.75	435.56	62.12	930.53	259.67	54.24	279.33	188.32	1118.26	193.27	244.86	75.11	827.31	7,812.00
2050-51	247.54	0.00	141.11	954.80	138.59	73.26	392.80	882.16	412.30	164.84	472.03	67.09	1008.11	281.97	59.14	302.76	204.41	1213.87	210.14	266.95	81.30	899.93	8,475.11
2051-52	270.26	0.00	154.25	1037.51	150.41	80.64	428.45	959.91	451.03	179.76	513.90	73.41	1096.64	308.03	64.64	330.42	222.29	1318.95	229.77	290.75	88.11	985.38	9,234.48
2052-53	293.68	0.00	167.14	1121.24	163.12	87.09	464.07	1035.51	489.00	194.19	558.04	79.39	1184.80	332.56	69.96	358.06	239.94	1424.93	249.38	316.44	95.96	1069.16	9,993.66
2053-54	318.07	0.00	181.75	1215.62	177.21	94.94	504.82	1120.47	530.79	211.68	605.38	86.40	1285.61	363.20	76.32	390.95	260.24	1542.83	270.45	341.99	105.31	1160.04	10844.07

Table 5-32: Total Toll Revenue –Rs. Cr (Optimistic)

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2023-24	18.98	0.00	10.88	85.68	10.96	5.27	32.26	83.34	33.08	13.22	37.25	5.94	88.83	22.31	4.96	23.68	18.22	103.32	17.09	19.93	6.02	59.67	**700.88**
2024-25	21.22	0.00	11.83	92.68	11.89	5.90	35.00	89.73	35.92	14.48	40.88	6.50	96.60	24.22	5.32	25.90	19.86	111.85	18.22	21.70	6.57	64.76	**761.01**
2025-26	23.37	0.00	13.51	103.06	13.16	6.72	39.29	98.81	40.61	16.17	46.10	7.14	107.07	27.18	5.86	29.01	22.17	123.71	20.68	25.78	7.37	74.26	**851.01**
2026-27	25.86	0.00	14.96	113.87	14.97	7.45	43.54	110.20	45.08	17.81	50.96	7.94	119.07	30.06	6.50	32.70	24.80	140.85	23.22	28.29	8.11	87.13	**953.37**
2027-28	28.86	0.00	16.88	128.49	16.60	8.45	49.25	123.16	50.81	20.21	57.45	8.77	133.55	34.67	7.44	36.94	27.78	155.59	26.03	31.55	9.00	97.01	**1,068.50**
2028-29	32.60	0.00	19.24	140.92	18.45	9.41	54.50	135.89	56.32	22.53	64.20	9.61	147.36	38.22	8.05	40.81	30.38	176.19	28.19	34.29	10.39	110.51	**1,188.07**
2029-30	35.70	0.00	21.14	156.25	20.71	10.60	60.44	149.39	62.62	24.99	71.56	10.85	162.91	42.33	8.85	45.92	33.84	192.03	31.26	38.25	11.43	119.65	**1,310.69**
2030-31	40.26	0.00	23.77	173.09	22.89	11.64	67.01	164.90	69.67	27.72	79.60	12.01	181.33	46.62	9.94	49.79	37.34	209.96	35.71	44.73	12.82	135.08	**1,455.88**
2031-32	44.83	0.00	26.23	191.33	25.60	12.97	74.61	182.24	78.06	30.65	88.20	13.10	200.67	52.56	11.07	55.58	41.00	237.03	38.65	48.86	14.92	155.81	**1,623.97**
2032-33	49.72	0.00	29.37	211.81	28.08	14.50	82.79	200.65	86.14	34.27	98.67	14.50	221.37	58.82	12.31	62.64	45.53	257.96	42.75	53.52	16.29	170.43	**1,792.13**
2033-34	55.15	0.00	32.24	231.25	31.29	16.06	90.71	219.54	94.56	37.66	108.12	15.96	243.44	64.41	13.49	68.79	49.66	288.13	48.16	58.79	17.52	191.02	**1,975.94**
2034-35	59.95	0.00	35.27	255.04	34.54	17.64	100.18	240.69	104.42	41.51	119.45	17.52	265.56	70.81	14.74	75.54	54.85	311.24	52.53	66.77	19.88	209.19	**2,167.32**
2035-36	66.52	0.00	39.32	279.93	38.08	19.63	109.97	263.08	114.35	45.86	131.52	19.33	292.58	79.12	16.12	83.84	60.13	345.35	58.47	73.79	21.88	233.72	**2,392.58**
2036-37	75.35	0.00	42.81	307.01	42.02	21.67	121.24	288.05	126.12	50.82	144.44	21.03	320.33	86.04	17.83	91.91	65.77	383.85	65.05	80.83	24.52	261.17	**2,637.85**
2037-38	81.75	0.00	47.23	335.16	45.99	24.01	133.69	314.80	140.24	55.52	159.30	23.28	352.98	95.68	19.54	101.53	71.99	413.89	70.79	87.30	26.63	281.85	**2,883.16**
2038-39	89.25	0.00	52.28	365.18	51.01	26.04	145.93	343.70	151.98	61.24	174.43	25.41	384.48	104.48	21.35	110.70	79.17	454.50	77.81	97.60	29.41	314.09	**3,160.04**
2039-40	98.71	0.00	56.97	400.36	55.92	28.81	160.39	375.75	167.04	66.90	191.66	27.69	421.66	113.81	23.47	122.15	86.30	501.48	85.02	106.84	32.30	346.76	**3,469.99**
2040-41	108.22	0.00	62.34	436.28	60.57	31.77	175.55	408.36	183.93	73.51	210.15	30.04	459.69	125.26	25.76	133.09	93.73	545.69	92.77	118.27	35.44	386.22	**3,796.65**
2041-42	118.70	0.00	68.68	477.65	66.76	34.81	191.97	444.81	199.50	80.64	230.02	32.96	502.54	137.42	28.23	147.48	102.52	599.33	101.98	127.87	39.23	423.35	**4,156.45**
2042-43	130.28	0.00	75.21	522.07	73.18	38.42	210.74	486.41	219.86	88.61	252.51	36.10	550.38	151.16	31.02	161.64	112.47	656.75	111.52	142.50	43.43	469.23	**4,563.50**
2043-44	143.69	0.00	82.35	570.03	80.37	42.31	230.29	530.46	240.86	97.17	276.21	39.22	601.15	165.06	34.04	175.63	122.29	715.02	124.00	154.95	46.76	513.13	**4,984.99**
2044-45	155.84	0.00	89.26	616.83	87.65	46.17	250.78	575.49	261.66	105.72	300.88	42.93	652.33	179.62	36.86	191.20	132.70	775.89	132.06	171.79	51.07	558.14	**5,414.86**
2045-46	169.54	0.00	98.23	672.33	95.62	50.43	273.62	625.56	285.85	115.55	328.78	46.47	709.13	196.38	39.99	210.47	145.01	853.28	145.22	183.03	56.07	615.94	**5,916.50**
2046-47	188.14	0.00	106.10	730.76	104.42	55.03	298.98	679.32	312.58	126.23	357.95	50.97	773.26	214.94	43.84	230.11	157.95	926.63	158.92	202.79	61.23	674.39	**6,454.54**
2047-48	204.24	0.00	117.29	799.31	115.01	60.96	328.61	743.45	343.01	138.54	393.42	55.51	843.53	235.89	48.22	252.06	171.90	1020.14	173.22	223.39	67.31	746.35	**7,081.34**
2048-49	222.39	0.00	127.09	864.15	124.10	65.95	355.54	803.66	371.39	149.94	428.00	60.28	914.19	255.68	52.25	273.76	186.79	1097.62	189.84	240.76	72.85	802.83	**7,659.05**
2049-50	243.25	0.00	137.91	939.89	135.12	71.80	388.12	870.96	404.72	163.54	465.54	65.80	992.02	278.27	56.68	298.12	202.41	1196.76	205.80	262.34	80.56	881.89	**8,341.50**

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2050-51	264.47	0.00	150.70	1020.09	147.93	78.21	420.69	945.53	440.12	178.08	505.89	71.15	1077.25	302.87	61.93	323.81	220.26	1301.97	224.13	286.76	87.42	961.59	9,070.83
2051-52	289.39	0.00	165.10	1110.97	160.83	86.26	459.95	1031.47	482.36	194.65	552.22	77.96	1174.60	331.60	67.83	354.14	240.15	1417.96	245.49	313.14	94.93	1055.51	9,906.51
2052-53	315.16	0.00	179.25	1203.51	174.76	93.35	499.35	1115.53	524.08	210.81	601.24	84.45	1272.14	358.85	73.57	384.55	259.96	1535.32	266.91	341.71	103.60	1148.12	10,746.23
2053-54	342.12	0.00	195.33	1308.00	190.18	101.96	544.50	1209.84	570.12	230.32	653.91	92.03	1383.82	392.74	80.44	420.82	282.72	1666.08	290.05	370.28	113.86	1248.67	11687.77

5.4 Modification in concession period.

Modification in concession period is analysed as per provisions of DCA and same is summarised in table below for all scenarios.

Pessimistic Case

Target Point 1- April 2033									
Target Month - March 2029	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period	Change in Concession period	Modified Concession Period
NORR	173.18	150.18	-13.28%	No	-	0.00%	30.00	0.00	

Target Point 2- April 2043											
Target Month - March 2036	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period	Change in Concession period	Total Change in Concession period	Calculated Modified Concession Period	Final Concession Period subject to Cap
NORR	448.25	361.47	-19.36%	No	-	0.00%	30.00	0.00	0.00	30.00	

Most Likely Case

Target Point 1- April 2033									
Target Month - March 2029	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period**	**Change in Concession period**	**Modified Concession Period**
NORR	173.18	153.54	-11.34%	No	-	0.00%	30.00	0.00	

Target Point 2- April 2043											
Target Month - March 2036	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period**	**Change in Concession period**	**Total Change in Concession period**	**Calculated Modified Concession Period**	**Final Concession Period subject to Cap**
NORR	448.25	378.60	-15.54%	No	-	0.00%	30.00	0.00	0.00	30.00	

Optimistic Case

Target Point 1- April 2033									
Target Month - March 2029	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period**	**Change in Concession period**	**Modified Concession Period**
NORR	173.18	157.33	-9.15%	No	-	0.00%	30.00	0.00	

Target Point 2- April 2043											
Target Month - March 2036	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period	Change in Concession period	Total Change in Concession period	Calculated Modified Concession Period	Final Concession Period subject to Cap
NORR	448.25	398.17	-11.17%	No	-	0.00%	30.00	0.00	0.00	30.00	

Hyderabad NORR-Modification in Concession Period						
Types of Scenarios	Pessimistic Case		Most likely Case		Optimistic Case	
Target Month	April 2033	April 2043	April 2033	April 2043	April 2033	April 2043
Target Revenue (Rs. Crores)	173.18	448.25	173.18	448.25	173.18	448.25
Calculated Revenue (Rs. Crores)	150.18	361.47	153.54	378.60	157.33	398.17
Difference %	-13.28%	-19.36%	-11.34%	-15.54%	-9.15%	-11.17%
If qualifies for Modification in Concession Period	No	No	No	No	No	No
Qualifying Increment or shortfall	-	-	-	-	-	-
Change in Concession period %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Original Concession Period	30.00	30.00	30.00	30.00	30.00	30.00
Change in Concession period	0.00	0.00	0.00	0.00	0.00	0.00
Total Change in Concession period	0.00		0.00		0.00	
Calculated Modified Concession Period	30.00		30.00		30.00	
Final Concession Period subject to Cap	0.00		0.00		0.00	

Thus, there is no modification expected in concession period due to variation in revenue as per above estimates in all scenarios.

CHAPTER 6

CONCLUSION & RECOMMENDATIONS

6.1 Conclusion & Recommendations

The Outer Ring Road, officially as, Jawaharlal Nehru Outer Ring Road and abbreviated as, O.R.R., is a 158 kilometer, 8-lanes ring road expressway encircling Hyderabad, capital of the Indian state of Telangana. ORR is one of the most important infrastructural developments which has complimented growth of Hyderabad as major metro of India. On Eastern side it has provided express connectivity to major commercial and upscale residential centres of Gachibowli, Banjara Hills, Jublee Hills, Hitec- City, Manikonda, Nanakramguda. As a result, large number of residential and commercial projects have come up on this north-east part of ORR. Tellapur, Mokila, Kollur, Narsingi can be named as few of these. On north and western side ORR connects to Shamirpet and Genome Valley.

ORR also provides fast connectivity to various radial state and national highways connecting to Mumbai, Nagpur, Karimnagar, Warangal, Suryapet, Vijayawada, Bengaluru. Regional traffic now does not need to go into congested network of Hyderabad.

All above indicates that Hyderabad Ring Road or Nehru Outer Ring Road (NORR) has potential of good traffic growth on sustainable basis, and it can be considered as a stable healthy project from the traffic and revenue point of view.

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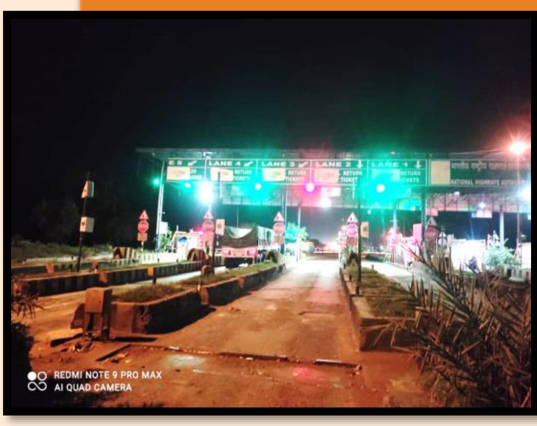
Six Laning of Santalpur – Samakhiyali Section of NH-27 from Km 339.700 to km 430.100 in State of Gujarat



MARCH 2024

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

GMD CONSULTANTS ★ NAVI MUMBAI ★

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Six Laning of Santalpur – Samakhiyali Section of NH-27 from Km 339.700 to km 430.100 in State of Gujarat

TRAFFIC STUDY & REVENUE PROJECTION REPORT
(FINAL)

MARCH 2024

GMD CONSULTANTS NAVI MUMBAI

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CHAPTER 1

INTRODUCTION

1.1 General

Project stretch from Santalpur to Samakhiyali (Km 339.700 to km 430.100) is a 90.40 km long 4-lane National Highway Section on NH-27 in the state of Gujarat. NH-27 which is basically east west connector of country.

Project stretch is gateway link to both Kandla and Mundra ports and also to region of Saurashtra from northern part of India. Stretch is also part of Jamnagar – Amritsar Expressway which will boost the connectivity of Saurashtra and both ports from north Indian sates of Punjab, Haryana, Rajasthan, and part of Uttar Pradesh.

The Government of India had entrusted National Highways Authority of India (NHAI) with developing of road infrastructure to match growing transportation demands of expanding economy. The Authority had resolved to undertake the six laning of existing four lane highway section from Santalpur to Samakhiyali (Km 339.700 to km 430.100) on BOT basis. This report is part of traffic and revenue assessment of stretch including future growth projections. Project Highway alignment is depicted in following figure.

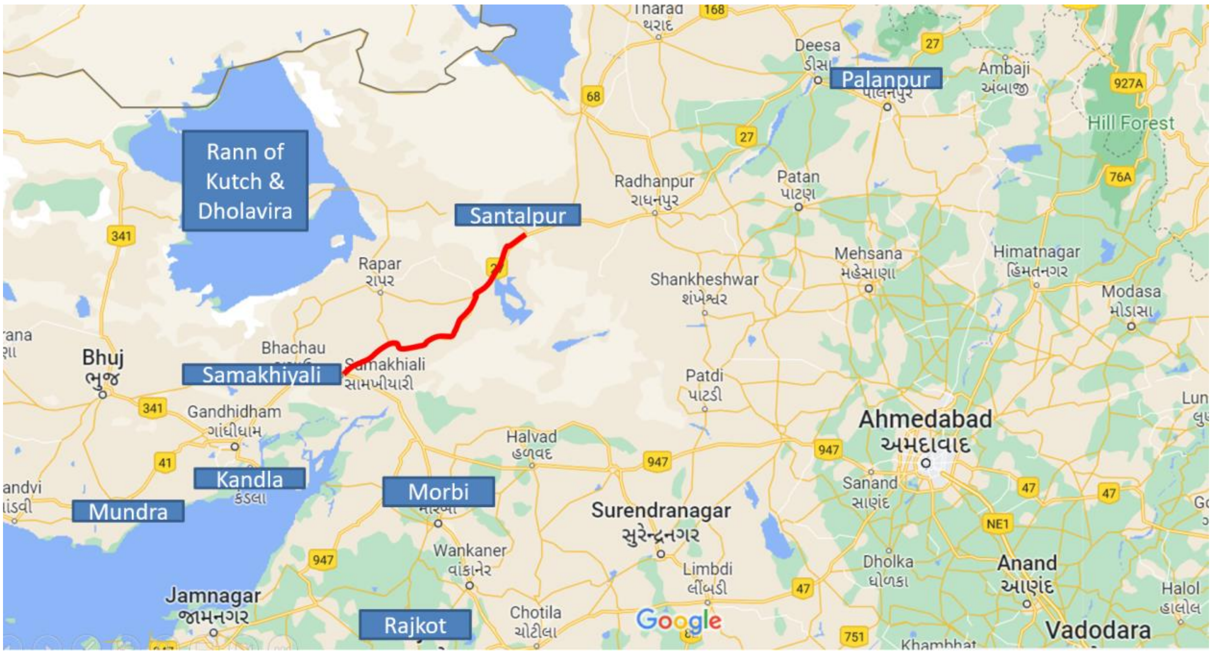


Figure 1-1: Project Location

M/s IRB Infrastructure Developers Limited (IRB) intends to participate in bidding for Six Laning of Santalpur- Samakhiyali section of NH-27 on BOT basis. **GMD**

Consultants have been assigned the wok of conducting traffic study and developing revenue model based on traffic projections and forecast.

For making the proper assessment of traffic volume on project stretch, base year traffic and its projection, GMD Consultants have carried out necessary traffic surveys and investigations. The base year traffic data is the primary input for determination of future traffic demand. With a view to estimate the base year traffic volume in different categories of goods and passenger carrying vehicles, the Classified Traffic Volume Count (CTVC) surveys, Turning Movement surveys (TMC), Registration Plate Survey (N.P.) & Origin-Destination (O-D) were conducted at Main Toll Plaza (MTP).

Year 2022-23 has been taken as the base year for projections and forecasting of traffic in horizon year.

This report fulfils part requirement of the assignment.

1.2 Project Scope

Following may be referred to as broad scope of Traffic Study of Six laning of Santalpur - Samakhiyali section of NH-27

- 14 days 24 hrs Classified Traffic Volume Count at main toll plaza location at Makhel. This was done with Videography of traffic for entire duration.
- Origin & Destination Survey (OD)- 1 Day at toll plaza (Additional One Day OD and CVC was done at Mehsana Bypass)
- Turning movement survey at important junctions / intersections- Optional
- Establishment of traffic pattern
- Working our traffic demand elasticity and growth
- Traffic forecast up to concession period.
- Preparation of revenue model up to concession period
- Any other analysis relevant to scope

1.3 Brief Description of the Project Influence Area (PIA)

Project stretch from Santalpur to Samakhiyali is gateway link for both the ports of Mundra and Kandla and also of Saurashtra region. The stretch is having combined traffic of NH-27 which is coming from Palanpur / Radhanpur Abu Road and northern link from north Indian states via NH-68 and small section of SH-127 from Suigaon to Sidhadha on project highway. Following figure show this the alignment of project highway in above context.

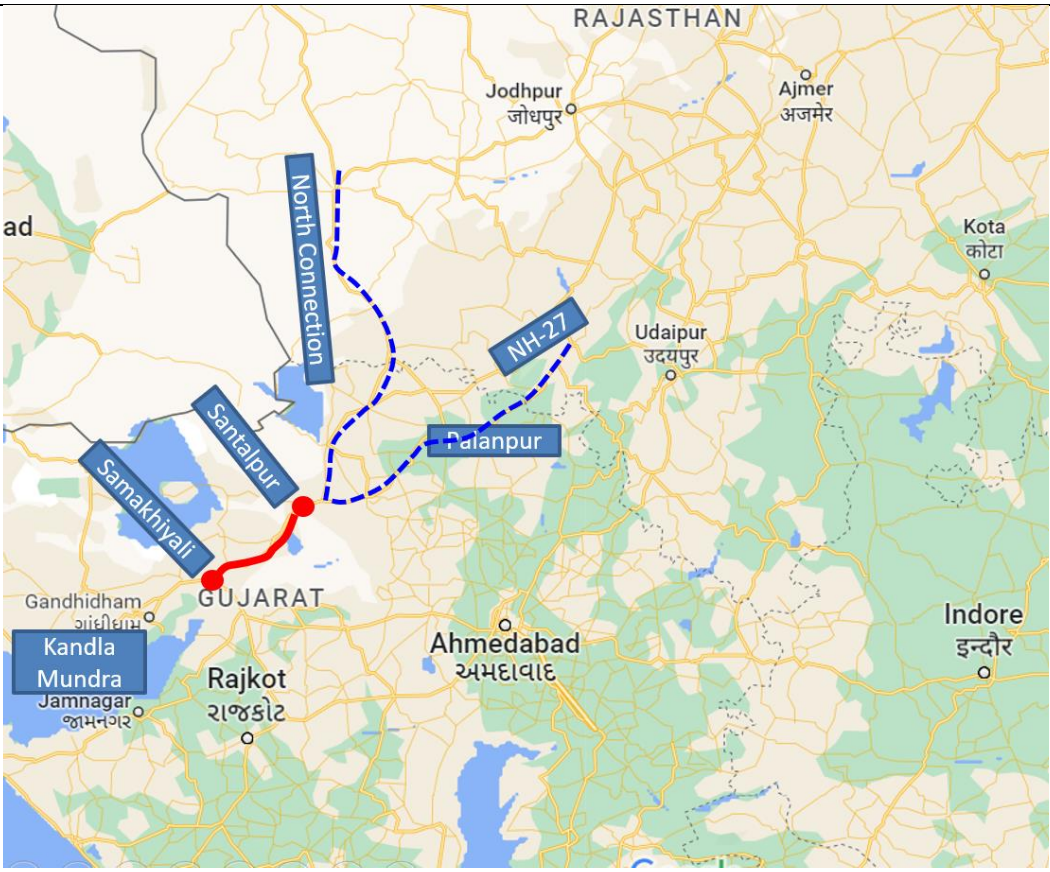


Figure 1-2 : Project Road in regional context.

As discussed previously project stretch is gateway link to both ports of Kandla and Mundra and also area of Saurashtra. On north of project stretch lies great Rann of Kutch which is also emerging as important tourist destination of area. Presence of historical Harrapan site of Dholavira in Rann of Kutch adds value to historical tourism.

1.4 Project Appreciation

Project stretch is currently four lanes. Condition of pavement is not that great at moment. Due to presence of heavy commercial traffic at many locations wearing coat has been damaged.

Figure 1-3 : Worn out wearing course of project road.

Project stretch is mostly dominated by heavy commercial traffic.

Figure 1-4 : Heavy Commercial Traffic on Project Stretch

There is Palanpur to Kandla Rail Line running along project highway. This is also an important transportation link from ports to mainland. This line is being doubled and electrified.

Figure 1-5 : Railway Line Palanpur- Kandla along Project Stretch

A new expressway from Jamnagar to Amritsar is under construction and is expected to complete by 2024. Project stretch is part of this new expressway. An interchange is planned at junction of Amritsar – Jamnagar Expressway with project stretch. This interchange is also under construction.

Figure 1-6 : Interchange at connection of Amritsar – Jamnagar Expressway near Santalpur

Project stretch has one Toll Plaza at Makhel. It has six lanes on either side including oversize lane. As observed and inquired Toll Operations are running smoothly and there no significant violation or forced exemption on toll plaza.

Figure 1-7 : Toll Plaza at Makhel

1.5 Organization of Report

The traffic study report covers the traffic study along the project corridor. The entire analysis, modelling and traffic and toll forecast have been covered in following sections:

i. Traffic Surveys and Analysis
ii. Traffic Forecasting
iii. Toll Revenue Forecasting
iv. SWOT Analysis

CHAPTER 2

TRAFFIC SURVEYS AND ANALYSIS

2.1 Traffic Surveys

The Consultants have carried out a reconnaissance survey of the project corridor to understand the general traffic and travel characteristics on the corridor.

Traffic data forecast is one of the important inputs required for a TOT/BOT/DBFO highway/roadway project. In order to arrive at a fair estimate of traffic forecast it is necessary to collect data, analyse, model, validate and then forecast. The Consultants have carried out a reconnaissance survey of the project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic studies have been carried out for the project.

- **Classified traffic volume counts**.
  Project stretch has single toll plaza at Makhel. Classified Volume Survey with videography has been done at this location.

- **Origin - Destination** studies at toll plaza locations with aim to capture all traffic on Project is done. Since OD survey was done on toll plaza with permission hence a good sample was obtained at location.

- **Number Plate Registration-** Number plate registration survey was conducted at Toll Plaza location for 24 Hrs.

- **Turning Movement Survey** – Turning movement survey was done at Sidhada junction. All traffic from north joins project road stretch from this junction.

Following figure shows traffic survey locations.

Figure 2-1 : Traffic Survey Locations

Later Additional survey was done at Mehsana Bypass to identify any Gandhidham or port bound traffic from north taking this alternate route via and which has potential to divert to project stretch after construction of Jamnagar Amritsar Expressway. Same is analysed in respective section.

The main objective of the surveys is to:

- Determine the existing traffic movement characteristics of project.
- Establish Base year traffic demand.
- Identification of travel patterns and influence area of project
- Deriving growth factor for traffic demand forecasting
- Estimation of corridor traffic including traffic diversion if any

Brief description of each of the survey undertaken for the project corridor is presented in subsequent sections.

Following photographs show traffic survey in progress at toll plaza and other locations.

Classified Volume Count in progress.

Figure 2-2 : Classified Traffic Survey with Videography

Original-Destination Survey: In progress

Figure 2-3: Origin Destination Survey in Progress

Number Plate Registration Survey: Number plate registration survey was done manually.

Figure 2-4: NPR Survey in Progress

TMC Survey: Turning movement traffic survey was done at Sidhada junction for north bound traffic**.**

Figure 2-5: TMC Survey@ Sidhada junction in Progress.

2.2 Classified Traffic Volume Count

The objective of conducting Classified Traffic Volume Count is to understand the traffic flow pattern on a roadway. The Classified Traffic Volume Count survey has been conducted at toll location for the entire 24 hours a day, 14-day period as recommended in IRC: SP: 19-2001 "Manual for Survey, Investigation and Preparation of Road Projects" at the proposed three toll plaza locations on NH-50.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles were further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles were counted separately. The detailed vehicle classification system considered for this study is presented in **Table 2.1.** Traffic surveys were conducted for directional traffic using video graphic method. A day was divided into two shifts of 12 hours each and different groups of supervisors were assigned for each shift. The count data was recorded at hourly intervals for each vehicle group for each direction of travel separately. Trained enumerators were deployed for counting and recording by making tally marks in the five-dash system.

Table 2-1 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer, Two-Wheeler, Three-Wheeler

Source - IRC: 64 – 1990

2.3 Origin Destination Survey

In order to understand the travel pattern in the influence area of the project, Origin and Destination (O-D) Surveys was carried out for one day (24 hours) at Toll Plaza location. The O-D survey was carried out based on the roadside interview method as described in IRC: 102-1988. Both passenger and commercial vehicles plying on the project road were stopped on a random sampling basis and interviewed.

Trained enumerators under the supervision of transport planners collected the trip characteristics using the survey forms designed for this purpose. The O-D survey elicited characteristics like origin, destination, frequency, length of trip, etc., both for passenger and goods vehicles. The information collected during roadside interviews was analyzed to obtain the trip distribution based on a zoning system suitably designed in the study.

2.3.1 Sample Size

As per normal standards of sound engineering practices 10-15% sample in each category of vehicle is considered as good representative sample on which traffic analysis can be done to arrive at probable traffic on project highway. Following table provides sample size.

Table 2-2 : Sample size for O-D Surveys at the Toll Plaza Location

Survey Location	Passenger OD Sample Size	Goods OD Sample Size	Total OD Sample	ADT (Passenger Plus Goods)	Sample Size as % of ADT
Makhel TP	423	3522	3945	9510	**41.48%**

It can be observed from above that a good traffic sample was collected at toll location which can be taken as representative to traffic on project road.

2.4 Data Analysis

2.4.1 Analysis of Traffic Volume Count

Data collected from the site were punched into the computer and analyzed using spread sheet in MS Excel. The various vehicle types having different sizes and characteristics were converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table .*** These factors were used for converting vehicles of different classification into common Passenger Car Unit (PCU).

Table 2-3 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5
Two-Wheeler	0.5
Three-Wheeler	1.0

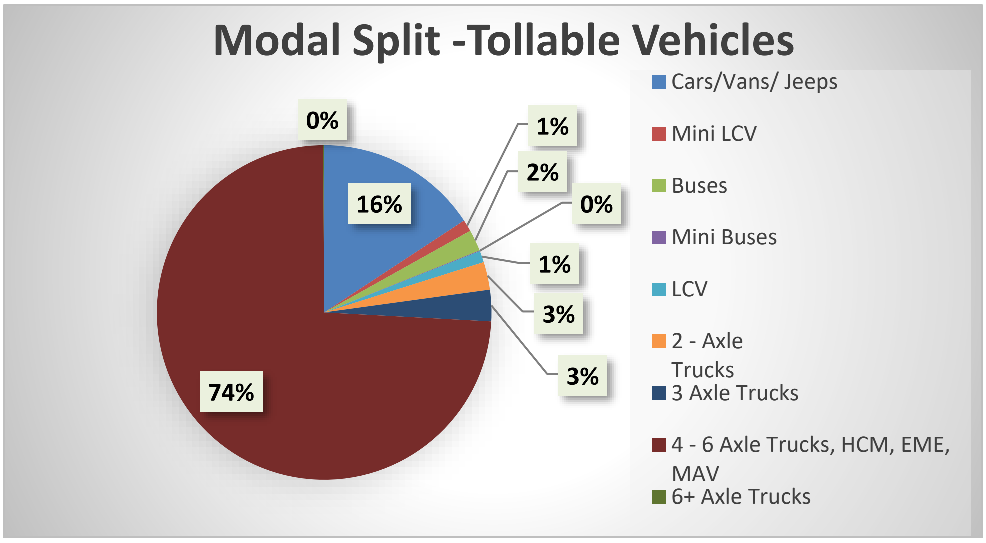
Source: IRC: 64-1990

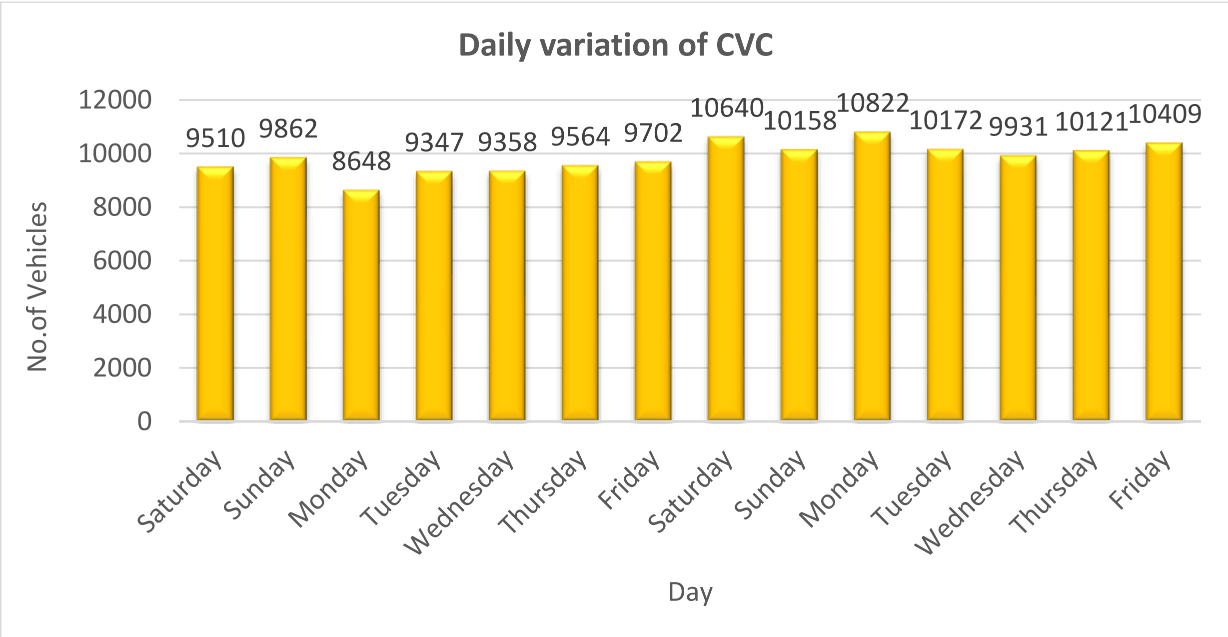
2.4.2 Average Daily Traffic (ADT)

Video graphic traffic count for 14 days has been done at toll plaza location including. Average daily traffic entering and exiting at various toll plazas is given in following tables.

Table 2-4: ADT (14 Days) at Makhel Toll

Date	Day	Passenger Vehicles				Goods Vehicles						Total
		Cars/Vans/ Jeeps	Mini LCV	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Army/ Govt Vehicles/ Ambulance	
01-Oct-22	**Saturday**	1247	108	225	9	99	223	298	7281	16	4	**9510**
02-Oct-22	**Sunday**	1283	98	205	6	76	202	272	7702	13	5	**9862**
03-Oct-22	**Monday**	1346	85	183	3	64	214	298	6443	10	2	**8648**
04-Oct-22	**Tuesday**	1360	103	206	6	73	211	260	7113	10	5	**9347**
05-Oct-22	**Wednesday**	1298	140	191	9	116	223	287	7085	6	3	**9358**
06-Oct-22	**Thursday**	1364	116	209	4	99	239	303	7220	8	2	**9564**
07-Oct-22	**Friday**	1332	120	176	1	128	232	329	7368	12	4	**9702**
08-Oct-22	**Saturday**	1537	99	220	5	87	388	340	7947	8	9	**10640**
09-Oct-22	**Sunday**	1554	107	214	11	83	343	307	7524	10	5	**10158**
10-Oct-22	**Monday**	2273	133	210	9	217	260	291	7416	10	3	**10822**
11-Oct-22	**Tuesday**	1894	127	222	9	151	271	315	7169	10	4	**10172**
12-Oct-22	**Wednesday**	1739	105	197	7	101	277	283	7208	9	5	**9931**
13-Oct-22	**Thursday**	1832	119	200	8	123	303	296	7228	9	3	**10121**
14-Oct-22	**Friday**	1699	113	211	7	114	323	316	7616	7	3	**10409**
	ADT	**1554**	**112**	**205**	**7**	**109**	**265**	**300**	**7309**	**10**	**4**	**9875**





2.4.3 Classified Average Daily Traffic (ADT)

It was observed at the site during survey that there are some vehicles which do not pay toll at toll plaza or are exempted. In order to develop a realistic traffic model for revenue, such vehicles have been excluded in tollable ADT. Such normalized ADT is given in table below.

Table 2-5: Classified ADT (14 Days) at Makhel Toll

Sr.no	Type of Vehicle	Total ADT	Exempt Vehicle	Tollable ADT
1	Car / Taxi / Jeep / Van	1554	431	1123
2	Mini LCV	113	17	96
3	Bus	205	0	205
4	Minibus	6	0	6
5	LCV	110	12	98
6	Truck - 2 Axle	265	12	253
7	3 - Axle	300	12	288
8	4 - 6 Axle	7309	12	7297
9	7 & above Axle	9	0	9

2.4.4 Seasonal Correction Factor

Seasonal variation factors are required to account for variations in the pattern of traffic volume on the sections of project road over different months or seasons of the year. There are various methods of determining the seasonality factor. The most direct method is using the past traffic counts, if traffic surveys are carried out round the year. But in India, round the year counts are seldom carried out or available for any road. In other method seasonal factors are calculated based on traffic related secondary data like fuel sales or toll collections etc. Petrol and diesel sale data obtained from fuel stations is most closely represents traffic variation for the project road having sales variation from month-to-month basis. Data regarding fuel sales has been collected from fuel outlets for duration of one- three years on project corridor in Project Influence Area (PIA). Following table provides details of same.

Table 2-6: Fuel sale Seasonal correction factor

From Fuel Data		
Month	**SCF Petrol**	**SCF Diesel**
April	0.95	1.08
May	0.74	1.02
June	0.92	1.14
July	0.95	1.09
August	0.89	1.19
September	1.14	1.14
October	1.00	1.02
November	0.98	0.92
December	1.13	0.85
January	1.31	0.87
February	1.10	0.94
March	1.12	0.90

Additionally, fast tag data for last year at toll plaza has been made available. Same has also been utilized for assessing the seasonality.

Following tables provide details of seasonal factors on the basis of Fast Tag.

Table 2-7: Fast Tag ETC collection Seasonal correction factor

From Fast tag ETC Collection Data	
Month	**SCF**
October	0.93
November	1.08
December	0.89
January	0.95
February	1.01
March	0.9
April	0.9
May	0.94
June	1
July	1.06
August	1.22
September	1.16

Average seasonality of fuel sale data and fast tag which comes to **0.96** for survey month i.e., October has been taken.

2.4.5 Annual Average Daily Traffic (AADT)

Video graphic traffic count for 14 days has been done at all toll plaza locations including entry and exit ramps. Annual Average daily traffic at toll plaza is given as under.

Table 2-8: AADT (14 Days) at Makhel Toll

	Vehicle Type	Seasonal Correction Factor	ADT	AADT
Passenger Vehicles	Cars/Vans/ Jeeps	0.96	1123	1079
	Mini LCV	0.96	96	93
	Buses	0.96	205	197
	Minibuses	0.96	6	6
Goods Vehicles	LCV	0.96	98	95
	2 Axle Trucks	0.96	253	243
	3 Axle Trucks	0.96	288	277
	4 - 6 Axle Trucks, HCM, EME, MAV	0.96	7297	7006
	6+ Axle Trucks	0.96	9	9

ADT	AADT	PCU	PCU INDEX
9375	9005	35042	3.89

The PCU index in the range of 3.5 to 4.0 is an indicator of very high dominance of heavy commercial vehicles.

2.4.6 Origin - Destination Survey

In order to understand the travel pattern in the influence area of the project, Origin and Destination (O-D) Surveys is one of the most important tools. O-D survey was carried out at the survey locations.

2.4.7 Data Validation

The collected data from Origin - Destination Survey were entered into the computer and checked manually. Incorrect entries were corrected by cross-checking it with original field data sheets. The data was also checked for inconsistencies.

2.4.8 Zoning System

For understanding the spatial dimensions of the trip characteristics of the vehicles interviewed during the O-D survey, a scientifically derived zoning system was adopted. While defining zone boundaries, the following were considered:

- Important towns and industrial centres along the project corridor.
- Administrative boundaries of district and state boundaries.
- Configuration of the project roads in the regional road network with respect to other National Highways.

The following table presents the Zoning System considered in this study.

Table 2-9: Zoning System considered for the study (Project Stretch)

Below Makhel TP (21-99)	Codes
Bhuj,bharapar	21
Somnaath,kadali	22
Kandla	23
Bhadra	24
Morbi	25
Jamnagar,sikara	26
Rajkot,gondal,amreli	27
Bhavnagar	28
Surat,Palsana	29
Mundra	30
Vapi	31
Khali	32
Dwarka	33
Porbandar	34
Diu	35
Jungadh,Plasva,Ajab	36
Amreli	37
Gandhidham	38
Samakhiali	39
Liliyana	40
Chitrod	41
Pratap gadh	42
Mevasa	43
Gagodar	44
Rampur	45
May	46

Below Makhel TP (21-99)	Codes
Vijpasar	47
Manfara	48
Chobari	49
Chhadavada	50
Vondh	51
Sikara	52
Bhachau	53
kabrau	54
Chirai nani	55
Dudhai	56
Bhimasar	57
Padana	58
Mokhana	59
Anjar	60
Ratnal	61
Nadapa	62
Dhaneti	63
Bidada	64
Mandvi	65
Godhra	66
Kothara	67
Jakhau	68
Nakhatrana	69
Matano madh	70
Hajipir	71
Dhordo	72
Khavda	73
Dhrobana	74
Navsari	75

Above Makhe TP (100-200)	Codes
Ahmedabad(mati)	100
Godhra	101
Dahod (Liladi)	102
Mehsana,Modasa	103
Patan	104
Palanpur,Deesa,Tharad	105
Bharuch	106
Vadodara	107
Adesar	108
Raadhanpur	109
Makhel	110
Santalpur	111
Bikaner	112
Bhiwadi	113
Jhodhpur,nagaur	114
Ladnun	115
Udaipur,chani	116
Kota	117
Bhilwara	118
Lakhagadh	119
Moda	120
Khandek	121
Fatehgadh	122
Manjuvas	123
Varnun	124
Sukhpar	125

Above Makhel TP (100-200)	Codes
Momaimora	126
Fatehgadh	127
Vijapar	128
Bambhansar	129
Piparala	130
Rozu	131
Garamadi	132
Madhutra	133
Vauva	134
Ranmalpura	135
Par	136
Rajusara	137
Dhokavada	138
Jakhotra	139
Bavarda	140
Chhansara	141
Sidhada	142
Parsund	143
Antarnes	144
Gokhantar	145
Bamnoli	146
Daldi	147
Charankha	148
Bojunda	149
Ajmer,Naner,Beawar	150
Jaipur,Alwar,Palsana	151
Balotra,Sarli,Barmer,Pali,jalore	152

Table 2-10 : Zoning System considered for the study (State Codes)

State in India above Gujrat (1-10)	Codes
Rajasthan	1
Haryana (Faridabad,Sirsa,Panipat)	2
Delhi	2A
Punjab	3
Himachal pradesh/Kashmir & Ladak	4
Uttarakhand (Haridwar)	5
Uttar pradesh(Agra,Aligarh)	6
Madhyapradesh	7
Jharkhand	8
Meghalaya/Assam	9
Arunachal pradesh	10

State in India below Gujrat (11-20)	Codes
Maharashtra	11
Chattisgarh	12
West bangal/Bihar	13
Odisha	14
Goa	15
Telangana	16
Karnataka	17
Andra pradesh	18
Kerala	19
Tamilnadu	20

Above zones are marked on map along with Samkhayali -sanatlpur alignment for better understanding.

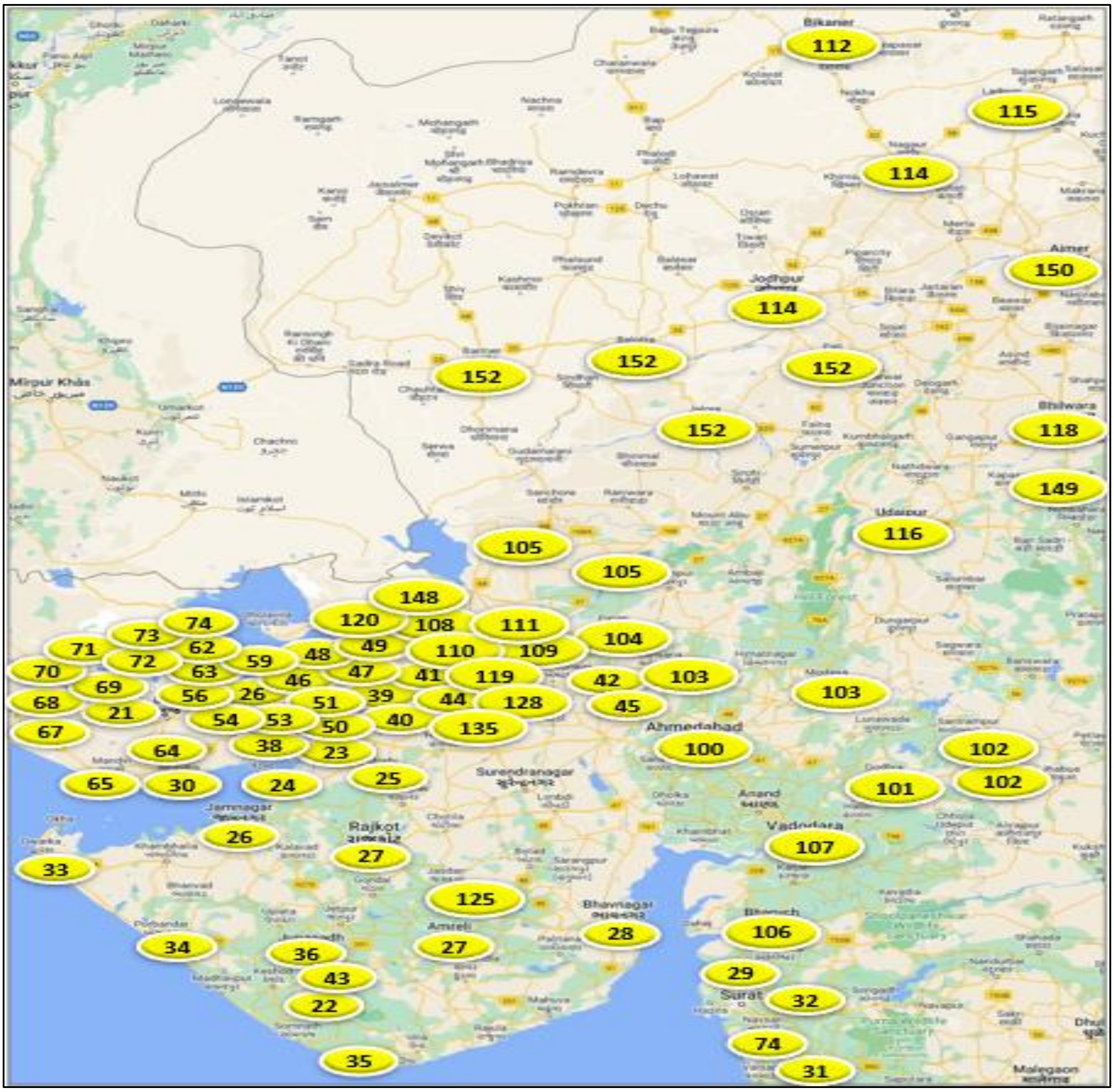


Figure 2-6: OD Coding Local Map

Following figure shows state level codes on country level map.

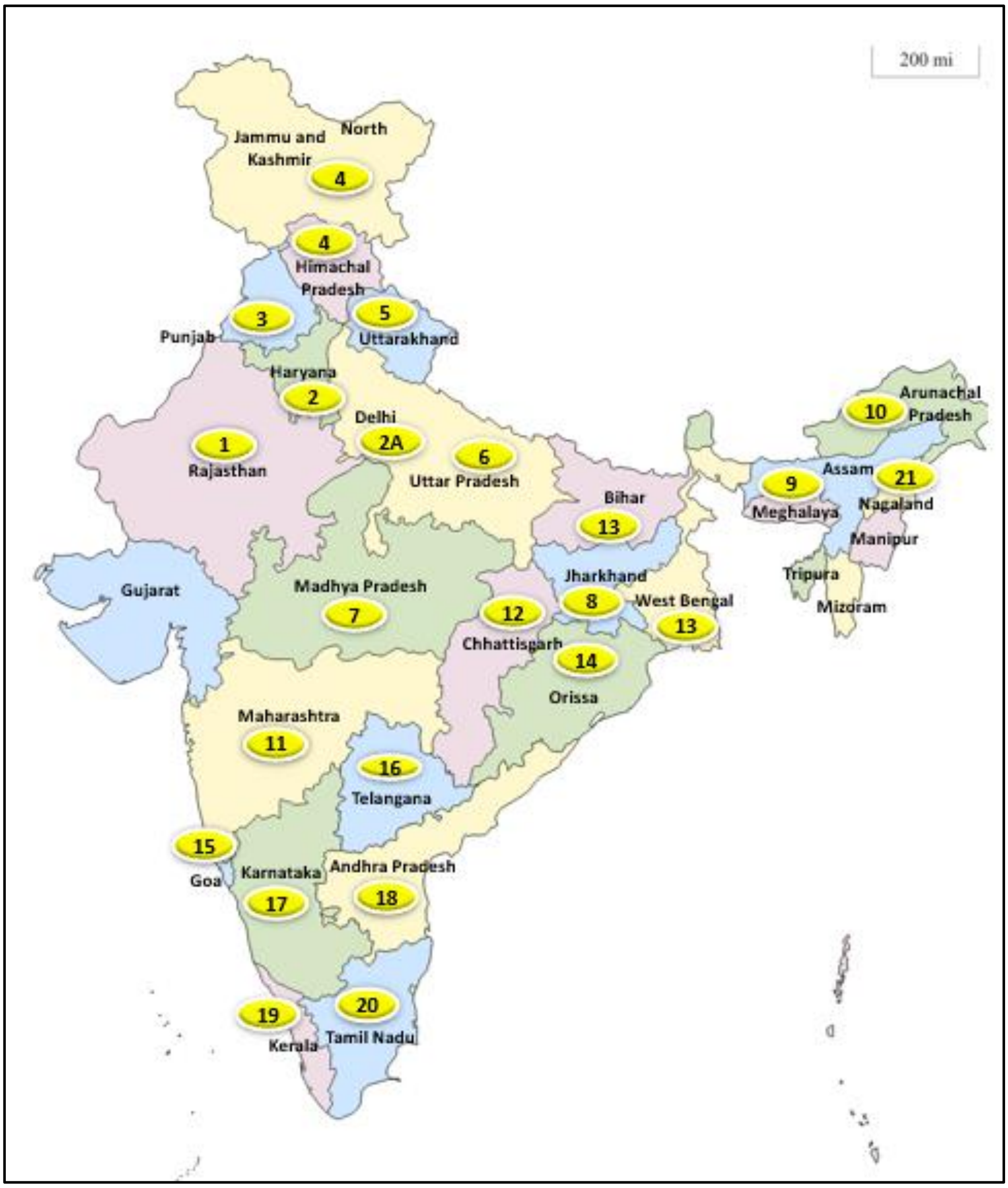


Figure 2-7: OD Coding Country Level

2.4.9 State Dominance

One of the most important parameters of OD analysis is state dominance among vehicles. This gives fair idea of local or regional character of traffic on project stretch. The state wise distribution of registered vehicles at each survey locations is given as under for passenger and commercial vehicles respectively.

Table 2-11 : State wise distribution of vehicles at Survey locations for passenger vehicles

State Code	Type of Vehicle		
	Car	Minibus	Bus
RJ	5.90%	0%	29%
GJ	89.75%	100%	54%
HR	1.24%	0%	8%
PB	0.31%	0%	4%
UP	0.31%	0%	2%
NL	0.00%	0%	1%
MH	0.62%	0%	0%
DL	0.31%	0%	0%
OR	0.00%	0%	0%
MP	0.62%	0%	0%
AR	0.00%	0%	2%
AP	0.31%	0%	0%
KA	0.31%	0%	0%
KL	0.31%	0%	0%
Grand Total	**100.00%**	**100.00%**	**100.00%**

It can be observed that in passenger vehicles Gujarat state has almost 90% share followed by Rajasthan.

Table 2-12: State wise distribution of vehicles at Survey locations for commercial vehicles

State Code	Type of Vehicle				
	LCV	2-axle	3-axle	MAV (4-6 axle)	MAV (>6 axle)
RJ	14.29%	10.00%	22.50%	51.25%	48.00%
GJ	48.57%	65.00%	57.50%	32.81%	35.00%
HR	17.14%	10.00%	10.00%	5.84%	9.00%
PB	0.00%	0.00%	2.50%	3.60%	3.00%
UP	11.43%	2.50%	5.00%	2.69%	2.00%
NL	0.00%	5.00%	2.50%	1.87%	1.00%
MH	5.71%	2.50%	0.00%	0.73%	0.00%
DL	2.86%	2.50%	0.00%	0.24%	0.00%
OR	0.00%	0.00%	0.00%	0.18%	0.00%
MP	0.00%	0.00%	0.00%	0.12%	1.00%
HP	0.00%	0.00%	0.00%	0.12%	0.00%
JK	0.00%	0.00%	0.00%	0.12%	0.00%
TN	0.00%	0.00%	0.00%	0.09%	0.00%
WB	0.00%	2.50%	0.00%	0.06%	0.00%
AR	0.00%	0.00%	0.00%	0.06%	0.00%
AS	0.00%	0.00%	0.00%	0.06%	0.00%
CH	0.00%	0.00%	0.00%	0.03%	1.00%
UK	0.00%	0.00%	0.00%	0.06%	0.00%
AP	0.00%	0.00%	0.00%	0.03%	0.00%
JH	0.00%	0.00%	0.00%	0.03%	0.00%
Grand Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Dominance of Gujarat state registered vehicles diminishes as configuration (axle) increases. In 4-6 category Gujarat share is only 32%.

This reflects long distance and presence of national traffic on project stretch.

2.4.10 Major OD Pairs

Following table provides details of major OD pairs on project highway.

Table 2-13: Major OD Pairs

Sr.no	Origin	Destination	%	Remarks
1	Balotra,Sarli,Barmer,Pali,jalore	Morbi	4.86%	Non-Port Traffic
2	Bikaner	Morbi	3.41%	Non-Port Traffic
3	Gandhidham	Ajmer,Naner,Beawar	2.81%	Port Traffic
4	Gandhidham	Delhi	2.04%	Port Traffic
5	Ajmer,Naner,Beawar	Gandhidham	1.96%	Port Traffic
6	Morbi	Uttar pradesh(Agra,Aligarh)	1.96%	Non-Port Traffic
7	Gandhidham	Raadhanpur	1.90%	Port Traffic
8	Palanpur, Deesa, Tharad	Mundra	1.62%	Port Traffic
9	Balotra,Sarli,Barmer,Pali,jalore	Jamnagar, sikara	1.62%	Non-Port Traffic
10	Kandla	Ajmer, Naner, Beawar	1.59%	Port Traffic
11	Palanpur,Deesa,Tharad	Gandhidham	1.50%	Port Traffic
12	Ajmer,Naner,Beawar	Mundra	1.50%	Port Traffic
13	Gandhidham	Uttar Pradesh (Agra, Aligarh)	1.48%	Port Traffic
14	Gandhidham	Jaipur, Alwar, Palsana	1.48%	Port Traffic
15	Kandla	Udaipur, chani	1.42%	Port Traffic
16	Mundra	Delhi	1.33%	Port Traffic
17	Mundra	Ajmer, Naner, Beawar	1.25%	Port Traffic
18	Haryana (Faridabad,Sirsa,Panipat)	Morbi	1.22%	Non-Port Traffic
19	Uttar pradesh(Agra,Aligarh)	Morbi	1.22%	Non-Port Traffic
20	Gandhidham	Udaipur,chani	1.22%	Port Traffic
21	Delhi	Mundra	1.19%	Port Traffic
22	Kandla	Uttar pradesh(Agra,Aligarh)	1.16%	Port Traffic
23	Haryana (Faridabad,Sirsa,Panipat)	Kandla	1.14%	Port Traffic
24	Bojunda	Samakhiyali	1.14%	Non-Port Traffic
25	Gandhidham	Punjab	1.08%	Port Traffic

It can be observed from above that majority of traffic on project highway is related to port. Second biggest impactor is Morbi tile industry.

Following table provides details of % share of various types of commodities on project highway.

Table 2-14: Commodity share

Commodity Type	% of Share
Empty	28.51%
Sand/Cement/Aggregate/Steel/ Brick	**17.92%**
Petrol/ Diesel/Gas/LPG/Sulphur	**13.91%**
Chemicals & Fertilisers	**13.49%**
Finished Consumer Goods	5.00%
Food Grains (Rice/ Wheat/ etc.)	4.43%
Others	3.92%
Textile Materials/Cotton	3.32%
Rubber/Wood/Tyre	3.01%
Vegetables/Fruits/ Milk/ Fish	2.47%
Drums/Tubes/Cables/Wire/Tiles	1.96%
Container	1.70%
Iron Coils	0.23%
Machines	0.09%
Industrial Goods (Alloy/Steel)	0.06%
Leather	0.00%
Paint/Dyes	0.00%
Fibre	0.00%
Pipe/Plastic	0.00%
Grand Total	**100.00%**

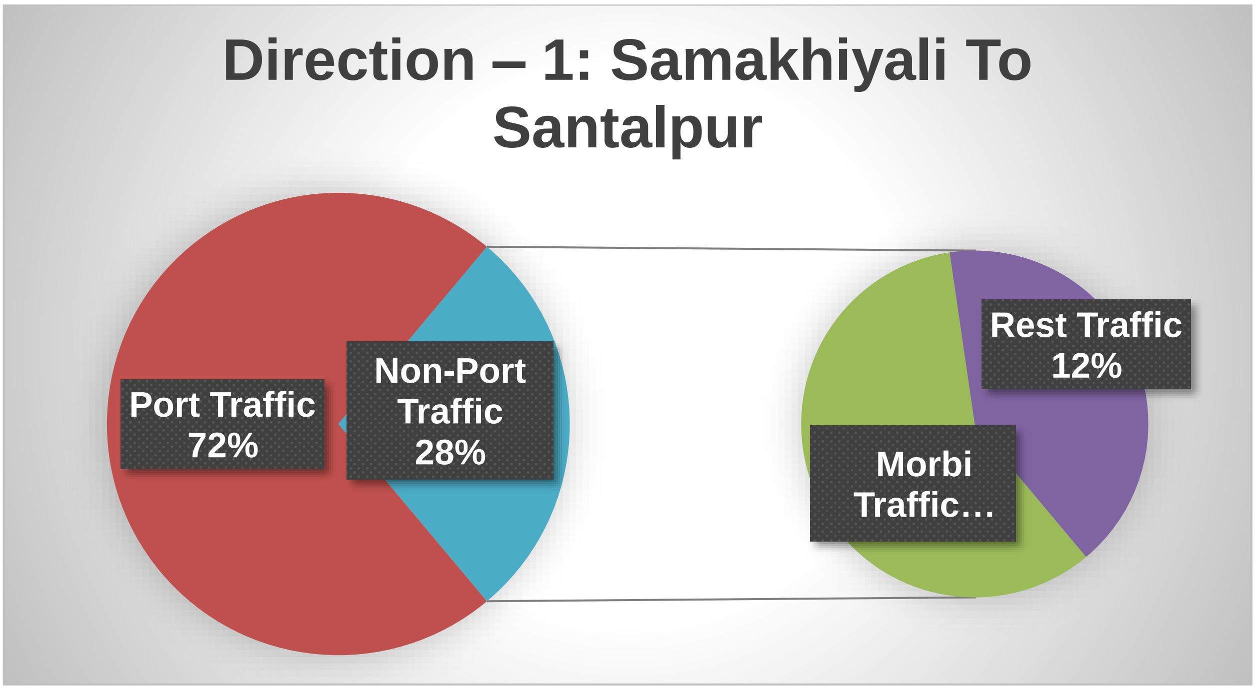
Following tables and graphs provide directional distribution of traffic on project highway in both directions respectively.

Table 2-15: Traffic Distribution- Commercial Vehicles

Traffic in %		Port Traffic	Non-Port Traffic	
			Morbi	Other
Direction - 1	Samakhiyali to Santalpur	72.20%	16.34%	11.46%
Direction - 2	Santalpur to Samakhiyali	46.14%	31.38%	22.48%
Average for both direction		**59.17%**	**23.86%**	**16.97%**

It can be further observed that about 60% of the traffic on project road has port impact. Morbi tile has an impact of about 24% on project traffic and balance 16% is local and Palanpur, Radhanpur traffic.

Following graphs show this distribution for better appreciation.



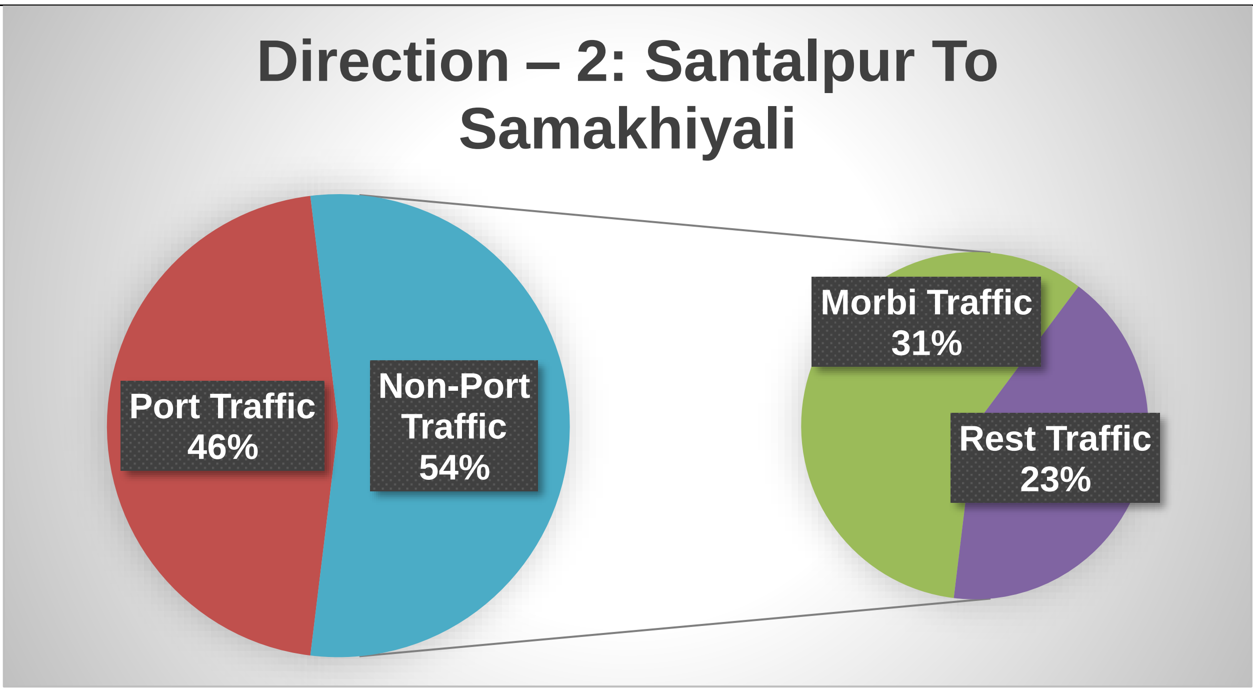


Figure 2-8: Distribution of project traffic.

Port traffic is further then analysed to understand the relationship of port traffic with the hinterland. Following table show distribution of port traffic in both directions.

Table 2-16 : Port Traffic Distribution (OD Sample)

D-1 (Samakhiyali to Santalpur) Port Traffic (Origin)		
North Zone	1016	84.88%
Local	175	14.62%
East zone	6	0.50%
Total Traffic Nos.	**1197**	

D-2 (Santalpur to Samakhiyali Port Traffic (Destination)		
North Zone	616	71.63%
Local	231	26.86%
East zone	13	1.51%
Total Traffic Nos.	**860**	

Thus, on an average about 80% of port traffic has relation in north India (Rajasthan, Punjab, Haryana, Part of UP and Delhi). Thus, any development or growth in this land would affect project road traffic.

2.4.11 Trip Segmentation Impact

Return journeys are tolled at discount fee. More volume of return trips has a reducing impact on revenue. Factor for converting all journeys into single journey for working out revenue has been worked out from the fast tag data which is available for four months from September 2022 to December 2022. Following table shows such conversion DP/MP factors.

Table 2-17 : DPMP Factors for four months

Type of Vehicle/Month	Dec-22	Nov-22	Oct-22	Sep-22	Avg.
Car/Jeep/Van	0.913	0.913	0.918	0.900	0.911
Mini LCV	0.875	0.875	0.880	0.876	0.877
Bus	0.792	0.792	0.800	0.789	0.793
Minibus	0.926	0.926	0.904	0.881	0.909
LCV	0.878	0.878	0.882	0.905	0.886
2- Axle	0.908	0.908	0.916	0.937	0.917
3 - Axle	0.961	0.961	0.951	0.965	0.960
4 to 6 Axle	0.977	0.977	0.977	0.981	0.978
7 and Above Axle	0.944	0.944	0.958	0.989	0.959

DP/MP factor has been further moderated as cars have the greatest number of toll exemption and violation. Finally adopted DPMP factors are given in table below.

Table 2-18 : DP/MP Factor

DP /MP FACTOR	
Type of Vehicle	**Makhel Toll**
Car/Jeep/Van/Light Motor Vehicle	0.900
Mini LCV	0.800
Bus	0.790
Minibus	0.880
Light Commercial Vehicle / Light Good Vehicle or Minibus	0.890
Two Axle Commercial Vehicles	0.920
Three Axle Commercial Vehicles	0.950
Multi Axle Vehicle (MAV) (Four to Six Axles) / Heavy Construction Machinery (HCM)/Earth Moving Equipment (EME)	0.975
Oversized Vehicle (Seven or More Axles)	0.950

2.4.12 Additional OD Survey at Mehsana

Additional traffic survey of OD and CVC was done at Mehsana Bypass Junction. This was done to capture any traffic from north Rajasthan or Punjab going towards Jamnagar or Kandla / Mundra / Gandhi Dham. This traffic has potential to divert to project stretch after construction of Jamnagar- Amritsar Expressway. A diversion cost analysis has been done for the alternate route once Jamnagar Amritsar Expressway is commissioned scenario. Select pairs of origin and destination were examined for benefit cost ratio analysis. Such analysis is shown as below.

Project Route (Mahua-Amritsar) VS Competing Route (Amritsar-Jamnagar Expressway)

Description	Route	Configuration	Road Length	VOC (Rs.)- (A)	Travel Time Cost (B)	Toll (Rs) (C)	Total Cost of Trip (Rs.) (A+B+C)	Cost Ratio	% Diversion to Comp Route
Goods	Ex. Route	4 Lane / 4 lane NH	1560.00	72079.84	24469.66	12433	**108982.69**	0.67	99.55
	Comp Route	6 Lane / 6 lane Expressway	1378.00	43732.64	16211.15	13242	**73185.94**		

Project Route (NH 62: Morbi-Bikaner) VS Competing Route (Amritsar-Jamnagar Expressway)

Description	Route	Configuration	Road Length	VOC (Rs.)- (A)	Travel Time Cost (B)	Toll (Rs) (C)	Total Cost of Trip (Rs.) (A+B+C)	Cost Ratio	% Diversion to Comp Route
Goods	Ex. Route	4 Lane / 4 lane NH	835.00	**38581.19**	**13097.54**	6655	**58333.68**	0.63	99.58
	Comp Route	6 Lane / 6 lane Expressway	685.80	**21764.76**	**8067.93**	6751	**36583.68**		

Project Route (NH 62: Rajkot - Bikaner) VS Competing Route (Jamnagar Amritsar expressway)

Description	Route	Configuration	Road Length	VOC (Rs.)- (A)	Travel Time Cost (B)	Toll (Rs) (C)	Total Cost of Trip (Rs.) (A+B+C)	Cost Ratio	% Diversion to Comp Route
Goods	Ex. Route	4 Lane / 4 lane NH	866.00	**40013.55**	**13583.80**	6902	60499.37	0.66	99.56
	Comp Route	6 Lane / 6 lane Expressway	747.30	**23716.55**	**8791.43**	7291	39798.93		

Project Route (NH 48: Jamnagar to Haryana (Hisar)) VS Competing Route (Jamnagar Amritsar expressway)

Description	Route	Configuration	Road Length	VOC (Rs.)- (A)	Travel Time Cost (B)	Toll (Rs) (C)	Total Cost of Trip (Rs.) (A+B+C)	Cost Ratio	% Diversion to Comp Route
Goods	Ex. Route	4 Lane / 4 lane NH	1238.00	**57201.82**	**19418.87**	9866.86	**86487.55**	0.73	99.52
	Comp Route	6 Lane / 6 lane Expressway	1180.00	**37448.85**	**13881.82**	11484.77	**62815.44**		

Project Route (NH 48: Rajkot to Haryana (Hisar)) VS Competing Route (Jamnagar Amritsar expressway)

Description	Route	Configuration	Road Length	VOC (Rs.)- (A)	Travel Time Cost (B)	Toll (Rs) (C)	Total Cost of Trip (Rs.) (A+B+C)	Cost Ratio	% Diversion to Comp Route
Goods	Ex. Route	4 Lane / 4 lane NH	1141.00	**52719.93**	**17897.36**	9093.77	79711.06	0.76	93.25
	Comp Route	6 Lane / 6 lane Expressway	1139.00	**36147.66**	**13399.49**	11010.56	60557.71		

Project Route (NH 62: Rajkot to Jodhpur) VS Competing Route (Jamnagar Amritsar expressway)

Description	Route	Configuration	Road Length	VOC (Rs.)- (A)	Travel Time Cost (B)	Toll (Rs) (C)	Total Cost of Trip (Rs.) (A+B+C)	Cost Ratio	% Diversion to Comp Route
Goods	Ex. Route	4 Lane / 4 lane NH	618.00	**28554.70**	**9693.75**	4925.46	43173.91	0.74	99.51
	Comp Route	6 Lane / 6 lane Expressway	599.00	**19010.05**	**7046.79**	5802.16	31859.00		

Project Route (NH 62: Morbi to Jodhpur) VS Competing Route (Jamnagar Amritsar expressway)

Description	Route	Configuration	Road Length	VOC (Rs.)- (A)	Travel Time Cost (B)	Toll (Rs) (C)	Total Cost of Trip (Rs.) (A+B+C)	Cost Ratio	% Diversion to Comp Route
Goods	Ex. Route	4 Lane / 4 lane Expressway	586.00	**27076.14**	**9191.81**	4670.42	40938.37	0.83	79.99
	Comp Route	6 Lane / 6 lane Expressway	640.00	**20311.24**	**7529.13**	6276.38	34116.74		

Project Route (NH 62: Morbi to Rajasthan (Berasar)) VS Competing Route (Jamnagar Amritsar expressway)

Description	Route	Configuration	Road Length	VOC (Rs.)- (A)	Travel Time Cost (B)	Toll (Rs) (C)	Total Cost of Trip (Rs.) (A+B+C)	Cost Ratio	% Diversion to Comp Route
Goods	Ex. Route	4 Lane / 4 lane Expressway	716.00	**33082.80**	**11230.95**	5706.52	50020.26	0.88	72.04
	Comp Route	6 Lane / 6 lane Expressway	830.00	**26341.14**	**9764.33**	7790.68	43896.15		

Weighted Average Diversion (%) for all above project routes was calculated and same comes to 93%

Following table shows potential number of traffic diversion due to commissioning of Amritsar Jamnagar Expressway.

	Direction	Type of Vehicles	2-Axle Truck	3-Axle Truck	Multi Axle Vehicles > =4 Axle
D-1	RAJKOT To PALANPUR	Total Vehicles (ADT)	331	401	1365
D-2	PALANPUR To RAJKOT		383	348	1299
D-1	RAJKOT To PALANPUR	Vehicles (OD)	210	334	463
D-2	PALANPUR To RAJKOT		183	261	552
D-1	RAJKOT To PALANPUR	Expansion Factor	1.58	1.20	2.95
D-2	PALANPUR To RAJKOT		2.09	1.33	2.35
D-1	RAJKOT To PALANPUR	Divertible Traffic	13	30	31
D-2	PALANPUR To RAJKOT		19	23	44
	Potential Traffic for diversion		**60**	**67**	**195**
	Total Potential Traffic for diversion		**322**		
	Diversion % (weighted avg.)		**93%**		
	Total diverging Traffic		**299**		

Thus, commissioning of Amritsar Jamnagar Expressway would have a positive impact on project traffic. Same is considered in traffic projections. The total diverging traffic as per above analysis is about 4% of total commercial traffic. Hence a positive additional growth of 4% has been taken in year for the factor in year 2025-26.

CHAPTER 3

TRAFFIC FORCAST

3.1 Introduction

Traffic is generated and grows as a result of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. Further these factors have uncertainties associated with them. Forecasts of traffic have, therefore, to be dependent on the forecasts of factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a limited degree of accuracy and hence the forecasting of future traffic levels cannot be precise. The success of any road project with private sector participation hinges on the accuracy and robustness with which the future traffic and revenues are estimated.

Further, future traffic forms the basis of the design of the transportation infrastructure facility and also determines the viability of the project. The following section deals with different methods, techniques, and considerations used in traffic forecast for the project under study.

3.2 Secondary Data Collection

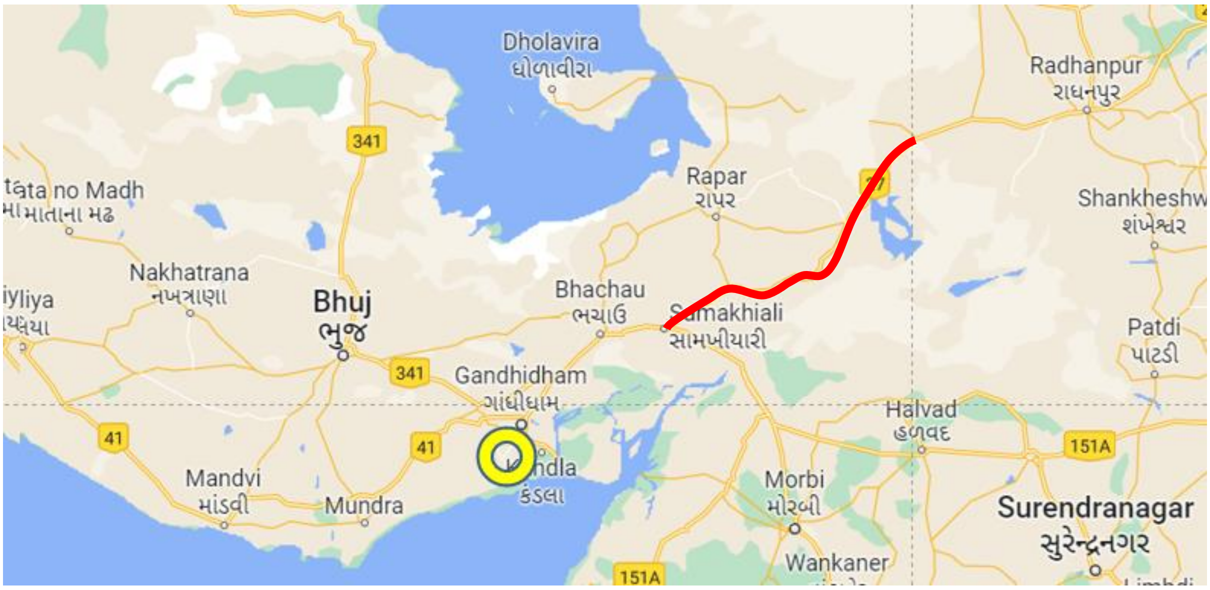
In addition to the above-mentioned traffic surveys, secondary data was also collected from the sources wherever the data available. This data is effectively used to determine and estimate past trends of growth and future pattern. Following secondary data was collected for study:

1. Fuel data collection from the fuel stations that are located along the project corridor to estimate the seasonal variations as well as traffic growth over the past years.
2. Vehicle registration data of Gujarat, Rajasthan, Haryana & UP.
3. Data of Indian national GDP (Gross Domestic Product), NSDP (Net State Domestic Product) of Gujarat, Rajasthan, Haryana & UP and PCI (Per Capita Income) of Gujarat, Rajasthan, Haryana & UP.
4. Estimated population data of Gujarat, Rajasthan, Haryana & UP states from Census.

This data is utilized in the study to estimate the growth factors along the project corridor. Relevant part of secondary data is placed at Annexure.

3.3 Development in the Project Influence Area

The Project Highway acts as gateway for the traffic of northern, western and part of central India leading to the major western ports of Kandla and Mundra in Gujarat. The Project Highway would majorly cater to the export and import traffic. The contribution of Kandla and Mundra port is about 60% of total traffic at project stretch. Hence, growth and expansion at port will have a major positive impact on project traffic



Brief details of key influencing establishments around the project corridor are as summarised below:

a. Kandla Port

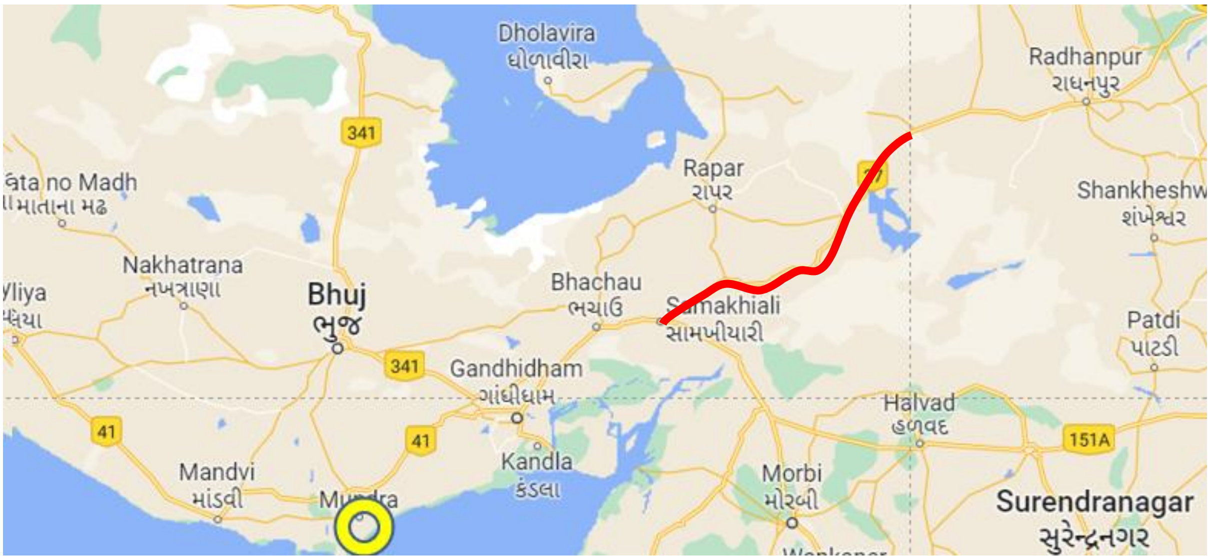
- Kandla is the largest Cargo handling major government port with a capacity of approximately 120 MMTA. It shares about 15% of all major port traffic. The port has shown good consistent growth over past years.
- Kandla Port handles a variety of cargo ranging from Bulk Cargo like Coal, Grain, Fertilizer, Minerals, Ores, Steel, Edible Oils, Chemicals, and Petroleum Products to Container Cargo, Automobiles and Crude Oil.
- Petroleum Oil Lubricants ("POL") is about 64% of total cargo handled by the Port.
- At present Kandla is having a Container Terminal with a capacity of 0.75 MTEU.

- The Government of India has recently approved the development of two new mega container terminals at Tuna-Tekra in Kandla Port at an estimated cost of ~ Rs 6,000 crores. This would result in increase in capacity of dry cargo from 60MMTA to about 79 MMTA and increase in container cargo capacity from 6 lakh TEU to 26 lakh TEU.

- The Container Terminal and Multipurpose Cargo Terminal are expected to be completed in ~FY25 / FY26 at a total expenditure of ~Rs. 6000 Cr. The development of the two mega terminals of Container & Multipurpose Cargo is expected to induce migration of some of the traffic from JNPT, Mumbai to Kandla and Mundra port in Gujarat.
- The above development of two major terminal is expected to give high traffic growth on Project Highway.
- **DP World wins bid for development of a mega-container terminal at India's Deendayal Port**
  - DP World has won a major concession to develop, operate and maintain the mega-container terminal at Deendayal port in Gujarat, on the western coast of India.
  - The project involves the construction of a mega-container terminal at Tuna-Tekra through a Public-Private Partnership (PPP). Once complete, the terminal will include a 1,100-metre berth, and will be capable of handling vessels carrying more than 18,000 TEUs. Total capacity will be 2.19 million TEUs.
  - The contract was awarded by the Deendayal Port Authority under on a Build-Operate-Transfer (BOT) basis.
  - Once complete, the terminal will help unlock future container traffic growth in India, catering to exports and imports from Northern, Western and Central India, reducing logistics cost and enhancing efficiencies across supply chains. The project will complement initiatives of the Government of India, such as the PM Gati Shakti Master Plan and National Logistics Policy, which has been introduced to provide greater focus on developing multimodal logistics infrastructure promoting economic growth.
  - DP World's strategic investments in ports and terminals in the country is aligned with the Indian Government's Vision 2047, which aims to quadruple the country's port handling capacity.

  Development of mega container terminal would have positive impact on project traffic as it would enhance the hinterland logistic relations and volume of export / import with Kandla port.

b. Mundra Port



- Mundra port is located further to Kandla port and is the largest private port in India with about 330 MMTA capacity, 24 berths & 10 Terminals. The port is owned by Adani Group having 12 ports in total. The mega port at Mundra is a major economic gateway that caters to the northern hinterland of India with multimodal connectivity.
- Mundra port has handled 144 MMT in year 20-21 which is highest by any India port.
- The port handles multiple products – coal, POL, Liquid, Dry Bulk. The Mundra port has expansion plans for various products including Waterfront Development, Multi- Purpose cargo and Liquid/ Gas/ Cryogenic Cargo handling quay development.
- The container handling capacity at Mundra port has shown a very impressive growth of over 15% in past 12 years starting with 0.92 MTEU in FY10 to 6.94 MTEU expected in FY23. The total Container handling capacity at Mundra port is 7.5 MTEU and would be operating at over 90% Capacity Utilization by end of FY23.

- Mundra port is coming up with expansion of Container Terminal of 1.2 MTEU at estimated expense of R. 1239 Cr. The expansion work of Container Terminal is under progress and is expected to be operational by FY24.
- Other growth drivers in long term at ports of Kandla and Mundra Ports will be increasingly adoption of China+1 policy by Europe and US market. The diversification of manufacturing facilities to India

in addition to other emerging Asian economies is expected to boost exports consistently over next 10 years.

- China decision to cap its steel production and no export of steel from Russia would help India steel export.
- Coal import has also seen a surge due to domestic shortage of Coal.
- Defence Corridor at Jhansi and also Tata Aircraft manufacturing plant at Vadodara would have some add on to port traffic.
- As per an ICRA report, the port traffic is expected to grow by 6-8% per year.
- The above development of major terminal is expected to give high traffic growth on Project Highway.

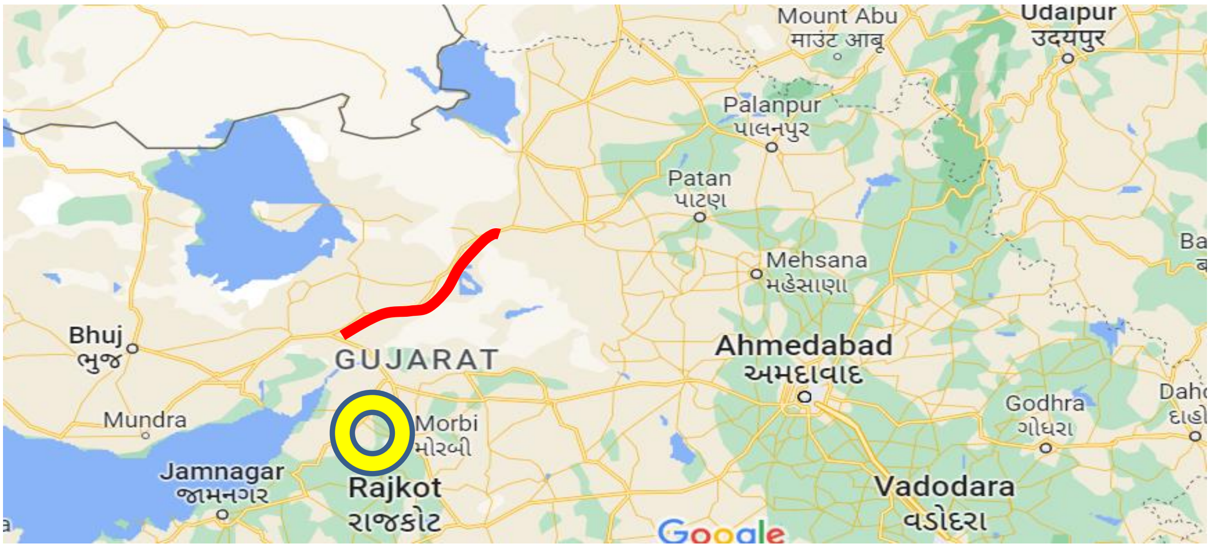
c. Barmer Refinery

- A 9 MTA capacity refinery and a 2 MTPA Petrochemical Complex is under construction at Pachpadra near Barmer. The complex is a 74:26 Venture between HPCL & Govt. of Rajasthan being developed across 4400 acres at a cost of Rs. 5000 Cr.

- This refinery will be connected with Jamnagar Refinery and Bathinda Refinery through Amritsar Jamnagar Expressway
- The refinery is likely to be commissioned by FY25.
- About 6.5 MTA crude will be transported from Gujarat for processing

- RIICO (Rajasthan State Industrial Development & Investment Corporation Limited) to develop PCPIR - Pertoleum, Chemical and Petrochemical Investment Region in vicinity of Refinery cum Petrochemical Complex (area ~100km)
- Development of a third refinery enroute Jamnagar to Amritsar, viz; Bhatinda, Barmer and Jamnagar will lead to Petrochemical based traffic growth along Project Highway (via Amritsar Jamnagar Expressway).

d. Ceramic Cluster at Morbi



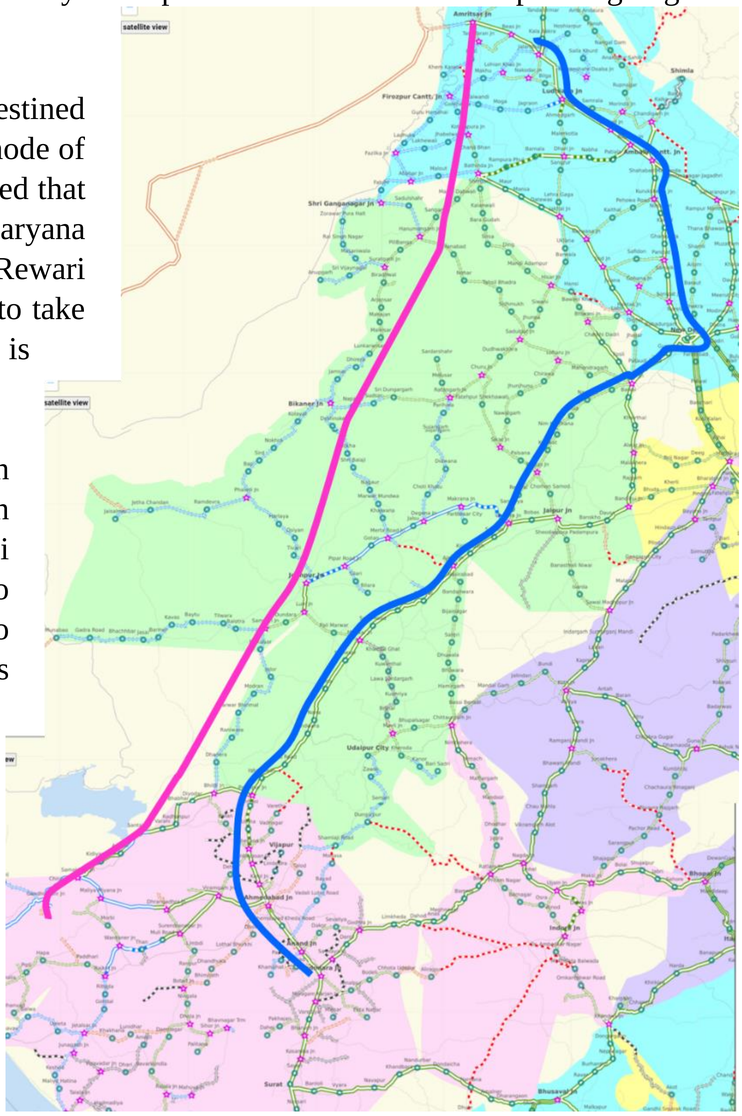
- Morbi accounts for 70% of total ceramic production in India and 2nd largest ceramic tile producing cluster in world.
- The cluster houses ~ 1,000 ceramic units, catering to 18 % of global demand and earns Rs 15,000 crore from exports.
- The ceramic cluster provides 10 Lakhs plus employment and produces over 14000 SQM tiles per day. The tiles are exported through Kandla and Mundra Port.
- The tiles are exported to more than 160 countries through Kandla and Mundra Port which are within 180 km from Morbi. This results in competitive pricing of the tiles in the international market due to savings in transportation costs. Domestic brands like Kajaria, HR Johnson, AGL, Somani outsource from Morbi. Global brands housed in Morbi include Daltile, Portobello, Emser, RAK, etc.
- Rajasthan has the highest proven reserves of China Clay followed by Gujarat. China clay mining is in Nagaur, Bikaner, Jaisalmer, Jodhpur, Bhilwara, and Chittorgarh.
- The Project highway is enroute to supply raw material to Morbi and finished products to domestic market in north India.
- The ceramic industry in India is expected to grow annually at a rate of ~9-10%.

Western DFCC -

Western DFCC is 1500 km plus dedicated freight corridor of railway which connects Dadri in Uttar Pradesh to JNPT in Mumbai. It is designed to carry double stack, higher capacity trains at higher speed. The section from Rewari to Palanpur is already operational since March 2021. The balance section from Palanpur-Makarpura-Sachin-Vaitarna-JNPT is expected to be commissioned in stages by end of FY24.

The Kandla and Mudra ports are connected to Palanpur by an operational western railway line. Since rail movement from Rewari to Palanpur and Palanpur to Kandla / Mundra are operational since long, the modal shift of traffic from road to rail has already taken place and no diversion is expected going forward.

Further, only the traffic originating and destined within 50-75 kms of the DFCC will find rail mode of transport logistically viable. It is also to be noted that the cargo originating from Punjab, Himachal, Haryana will have to travel from Sahnewal to Dadri, Rewari along Eastern DFCC from where it will have to take Western DFCC to reach Palanpur which is connected to Ports via Western Railway.



The traffic originating from the northern hinterland has to take rail route via. Eastern DFCC by 450 kms from Sahnewal upto Dadri and then take Western DFCC from Dadri to Palanpur by 786 kms and further Palanpur to Gandhidham/Kandla by western rail which is 300 kms. Thus, the total rail route will be over 1500 kms which is ~25% longer as compared to alternative road network via. upcoming Jamnagar-Amritsar Expressway having a length of ~ 1200 kms.

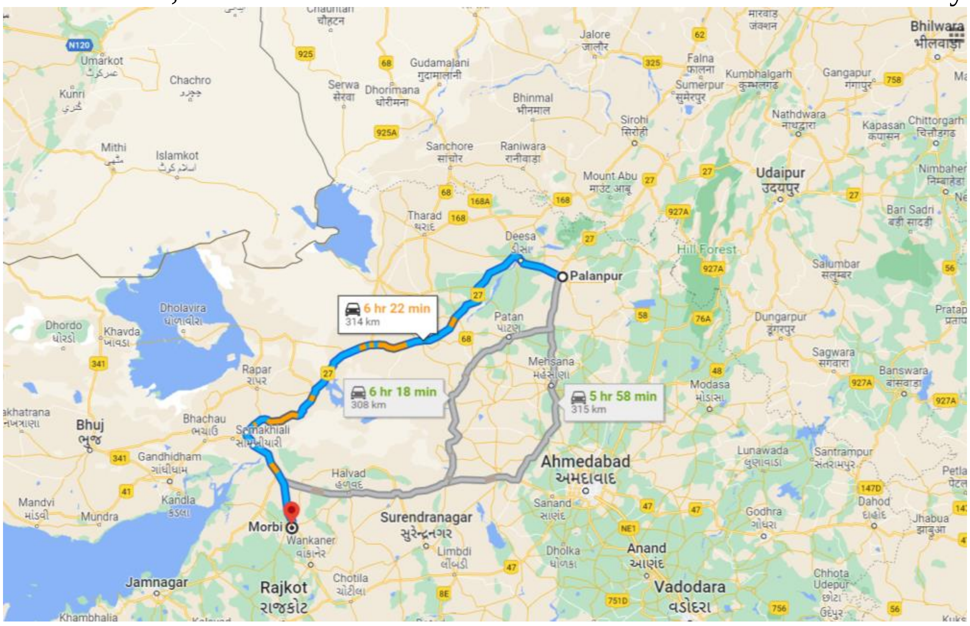
Thus, we do not see the material impact of DFC on the Project and no further diversion of good traffic to DFCC is envisaged.

e. Amritsar – Jamnagar Expressway

The Amritsar – Jamnagar Expressway (AJE) is an access controlled 1300 km long partly greenfield / brownfield expressway. The AJE which is 4-lane up to PB/HR border and then 6-lane up to Jamnagar is under execution and is likely to be commissioned in FY25. The AJE will not only act as port connectivity expressway but will also have induced traffic due to connectivity of 3 refineries enroute, the Bhatinda refinery, Barmer refinery and Jamnagar refinery. Further all the major cities enroute the AJE are developing bypass / ring roads which will facilitate diversion of long-distance traffic. Thus, the long-distance traffic will have a better level of service and shorter turnaround time for port bound traffic which will be comparable to Freight movement by rail.

f. Morbi – Rajasthan via Mehsana: Divergence

There is some traffic originating from Morbi, Rajkot and travelling towards Punjab, Himachal, Haryana, Rajasthan and are taking alternate route via. Mehsana, Palanpur. Once the AJE is commissioned, the distance to the northern states via. AJE will be shorter by ~5-7%.



We have conducted OD survey along this alternate route near Mehsana and have worked out a total impact of divergence from alternate route and the development of AJE together will be nearly +2% for all categories of commercial vehicles.

Summary of impact as estimated is given in table below.

Sr. No	Development Factor	Impact	Action
1	Amritsar Jamnagar Expressway	Reduces travel time substantially. Connects Rajasthan, Haryana, UP & Punjab with a faster connectivity. New fast connectivity may add to growth in initial years of its commissioning. May also add new development area around its greenfield corridor	4% additional traffic including divergence may be taken in year 2025-26, expected commissioning of full stretch
2	Barmer Refinery	New refinery. About 70% of crude is expected to come from Gujarat and also Amritsar – Jamnagar Expressway would provide fast access to ports for export / import,	It will add to traffic growth on project road once Expressway is commissioned. No additional impact separately
3	Kandla Mundra Ports	About 30% traffic on project stretch has Kandla Mundra connection. Both ports are doing good in terms of growth. These basically serve to northern hinterland of Rajasthan, Gujarat, Haryana, Punjab and UP	Capacity and facility expansion of both ports would support traffic growth on project stretch. No additional impact on traffic
4	Morbi Tile Industry	90% of India's Ceramic is produced in Morbi. Over 1000 Ceramic factories. Domestic supplies to northern India through project stretch.	Would support traffic growth on project stretch. Would be part of growth
5	Road Network	No Competing Road Network	No Impact
6	DFCC	Kandla to Palanpur is existing rail line and Palnpur to Rewari is operational since last year. DFCC stretch from Rewari to Palanpur is already operational. Most of	No additional diversion is envisaged.

Sr. No	Development Factor	Impact	Action
		the traffic has already been shifted. Lack of last mile connectivity from DFCC hub to final destination of Goods will keep dependability of road network for goods transport.	

3.4 Trend Analysis

Time series data of vehicle Registered in state of concerned states is taken from respective authorized websites and the same is used as the base data for analysis of growth.

Growth of vehicle traffic depends on type of vehicle. Traffic growth on any highway typically depends on number of economic parameters like

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. Same is recommended in IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways.

Following can be pair of vehicle type and independent variable for elasticity modelling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

Same is used in analysis below.

3.5 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish the relationship between the growth in number of given category of vehicle with one of the economic variables considered, such as NSDP, per capita income and population growth.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is as given below:

Log (P) = k x Log (EI) + A

Where,

P = Number of Vehicles (Mode wise)

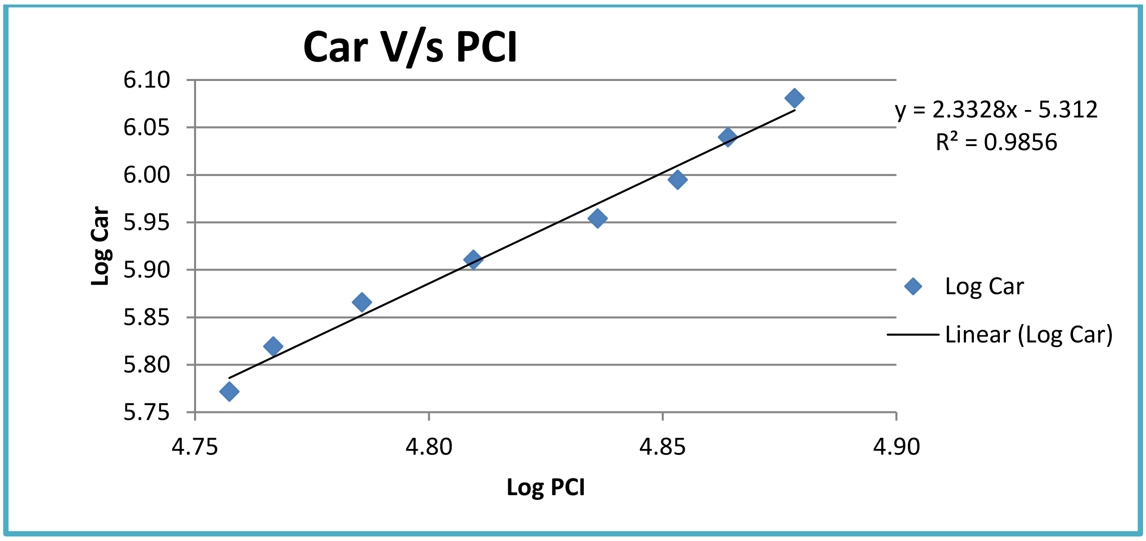
EI = Economic Indicator

A = Regression constant

k = Elasticity coefficient (Regression coefficient)

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

It is observed that most of the traffic at project stretch comes from Rajasthan, Haryana, Uttar Pradesh and Gujarat state. Hence economical model regression has been done for independent indicators for these states. The graphical presentation of the elasticity regression is presented in figures below:



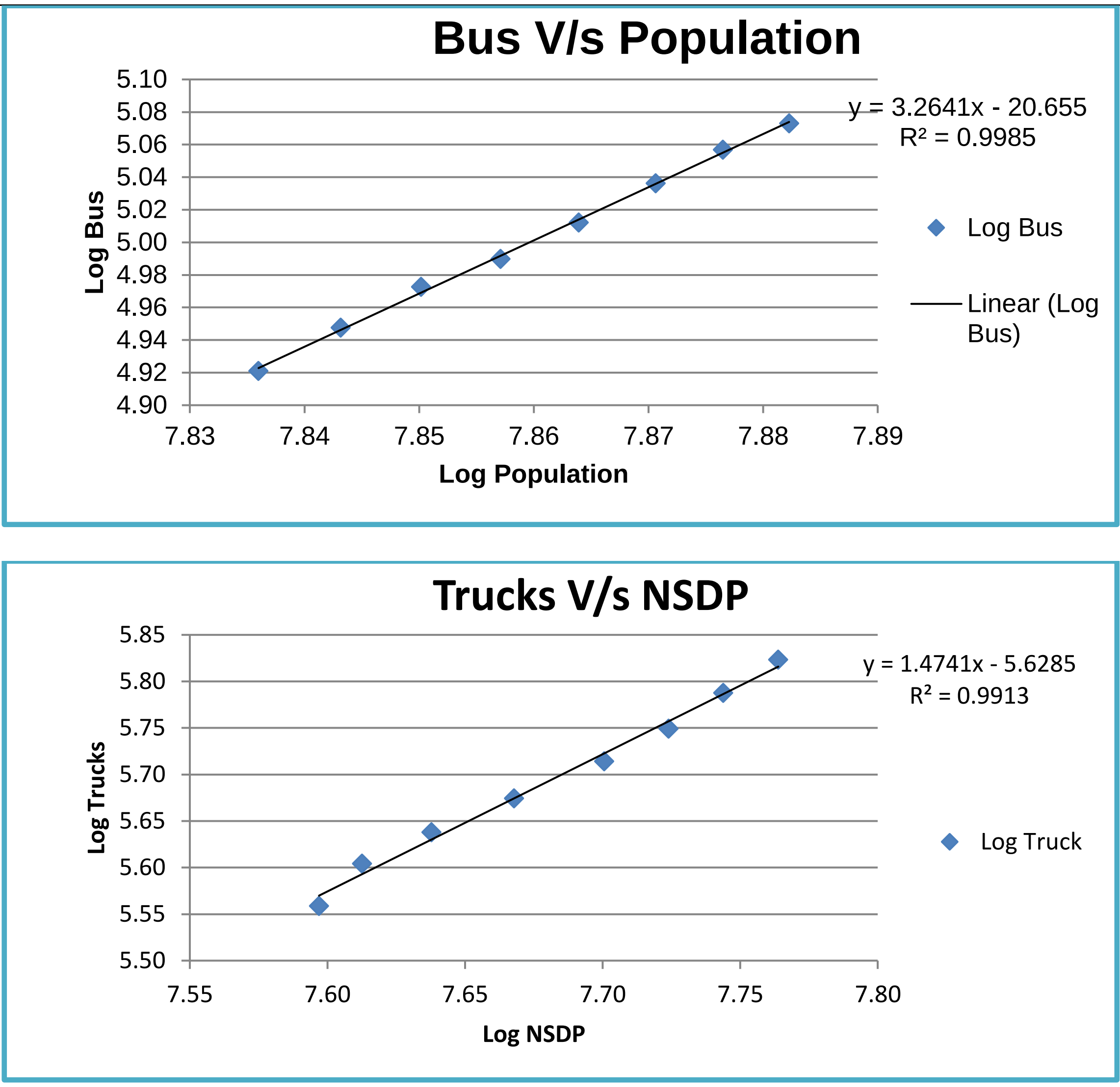
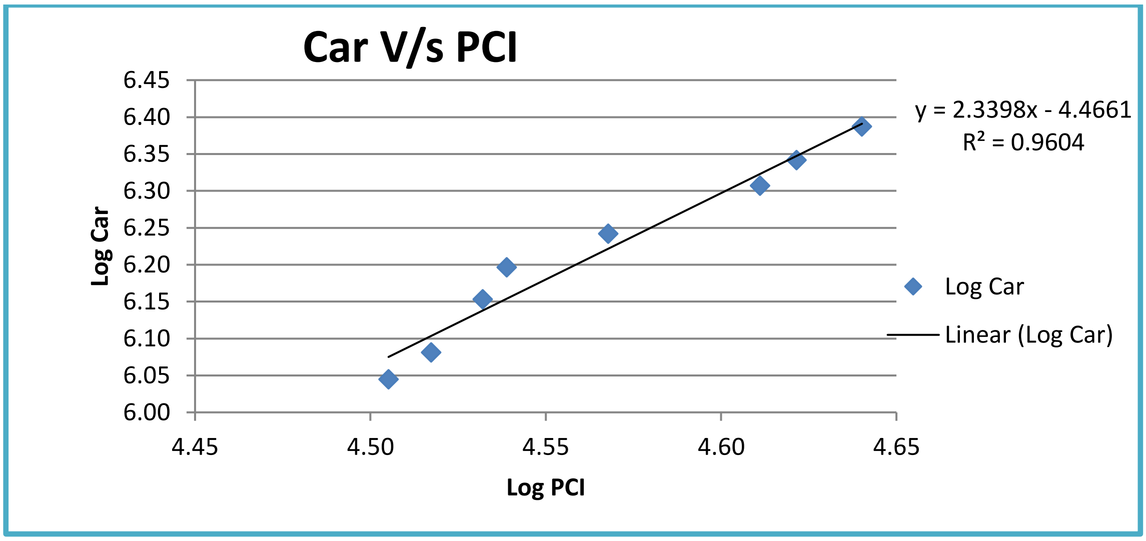
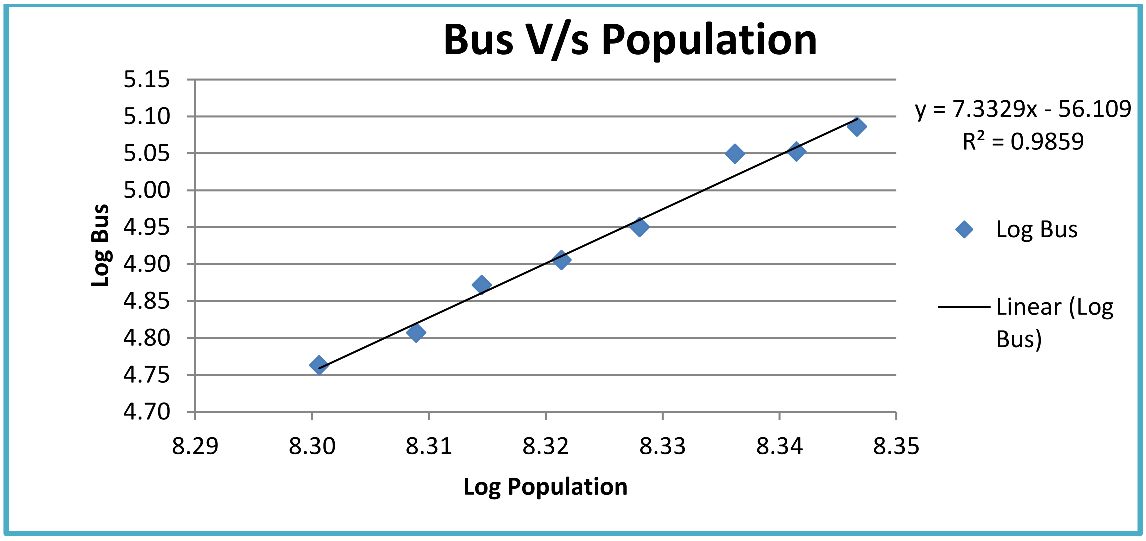


Figure 3-1: Elasticity Regression for Rajasthan





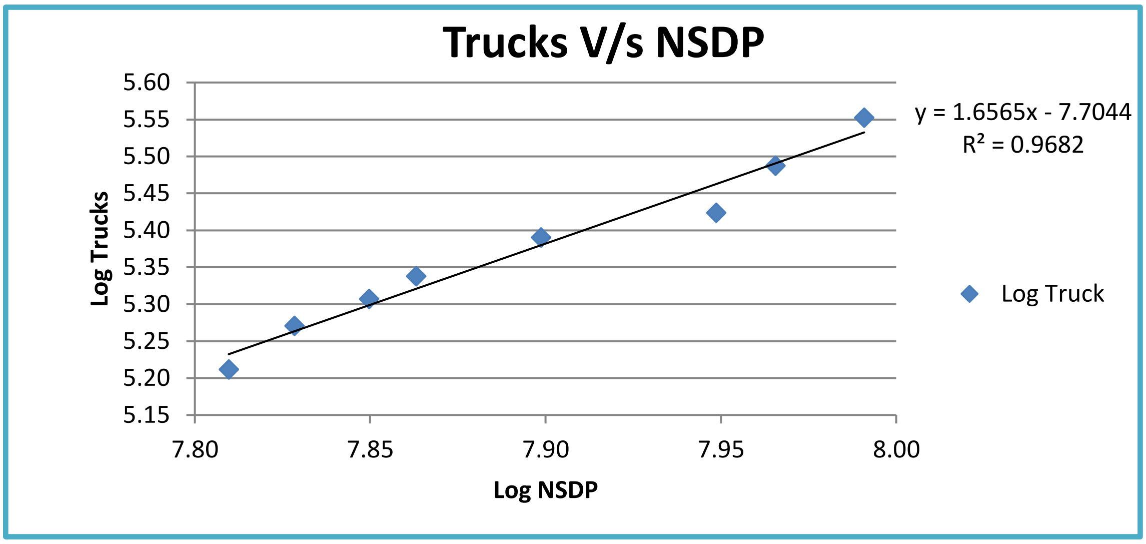
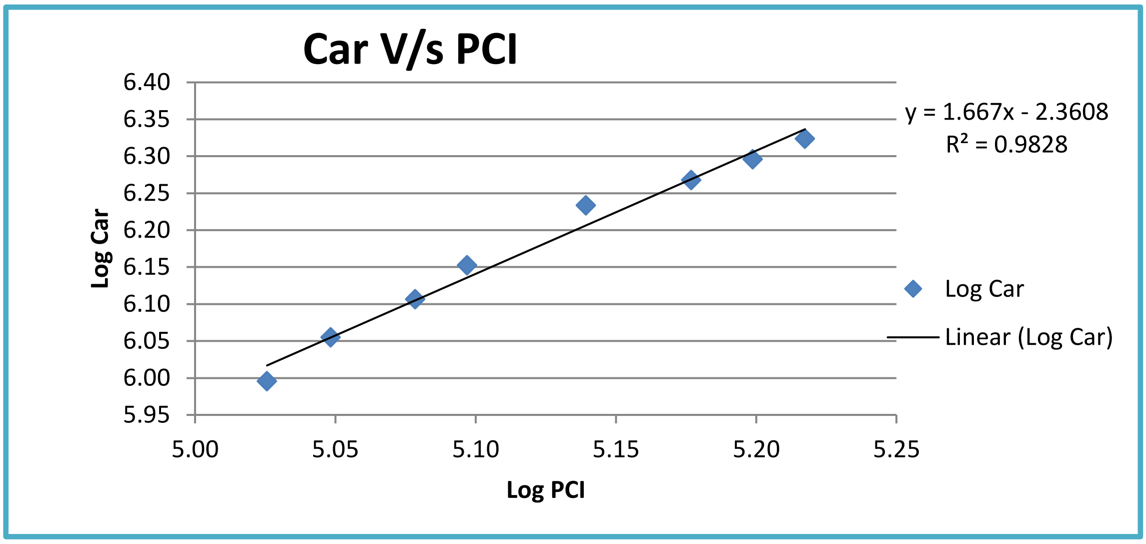
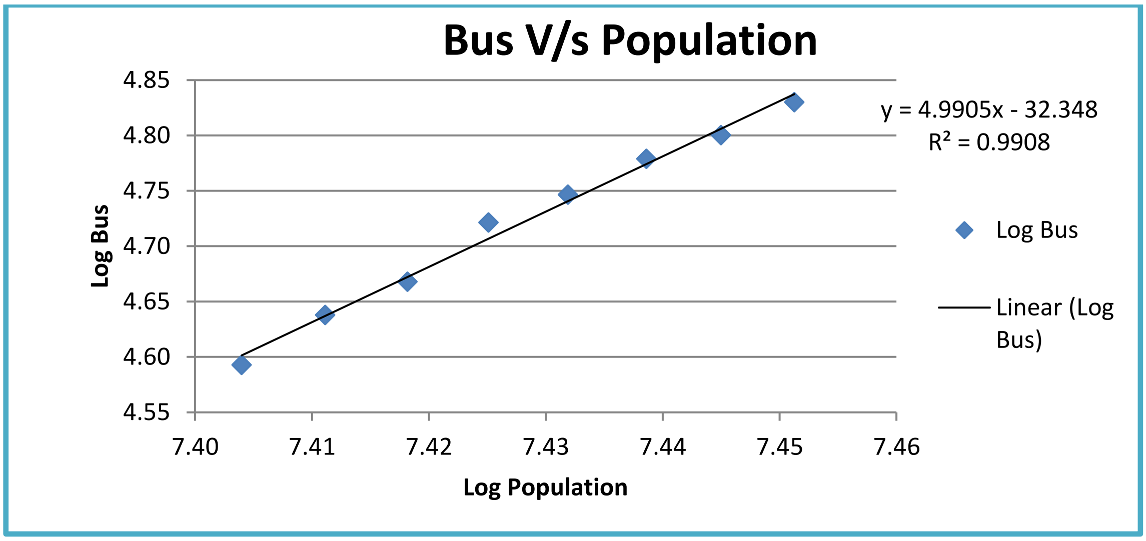


Figure 3-2: Elasticity Regression for Uttar Pradesh





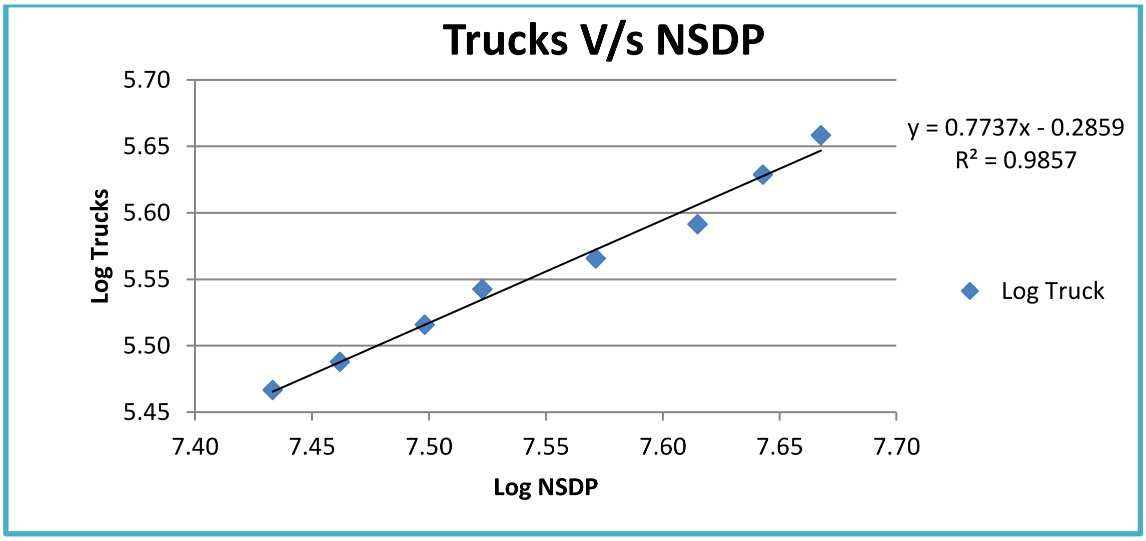
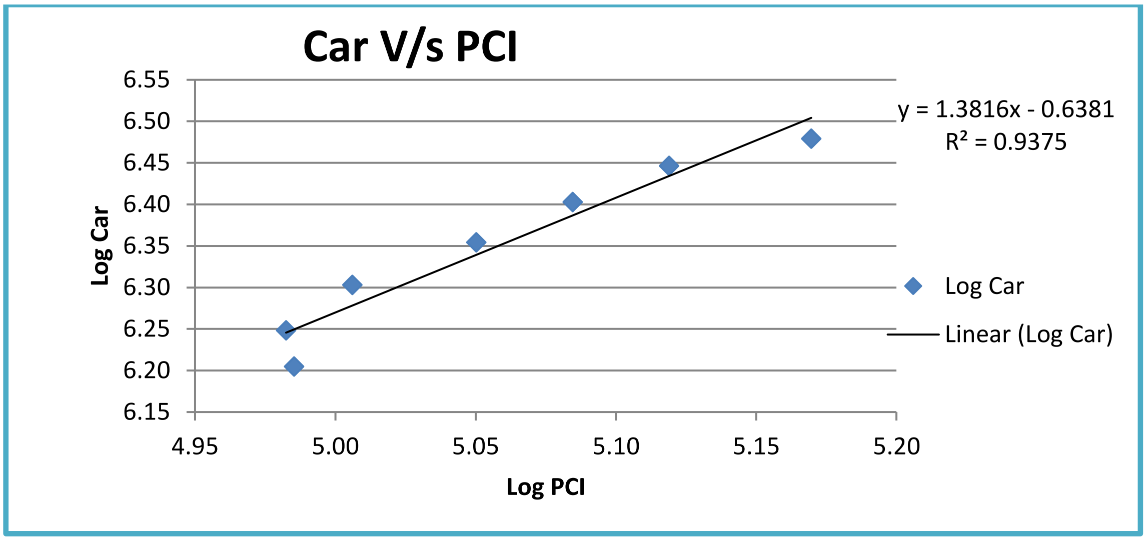
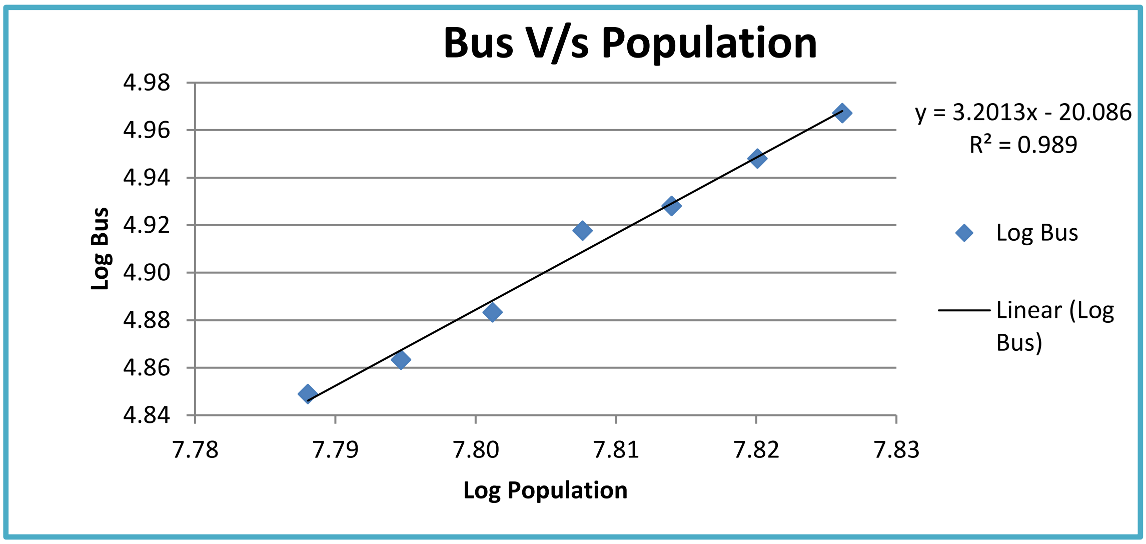


Figure 3-3: Elasticity Regression for Haryana





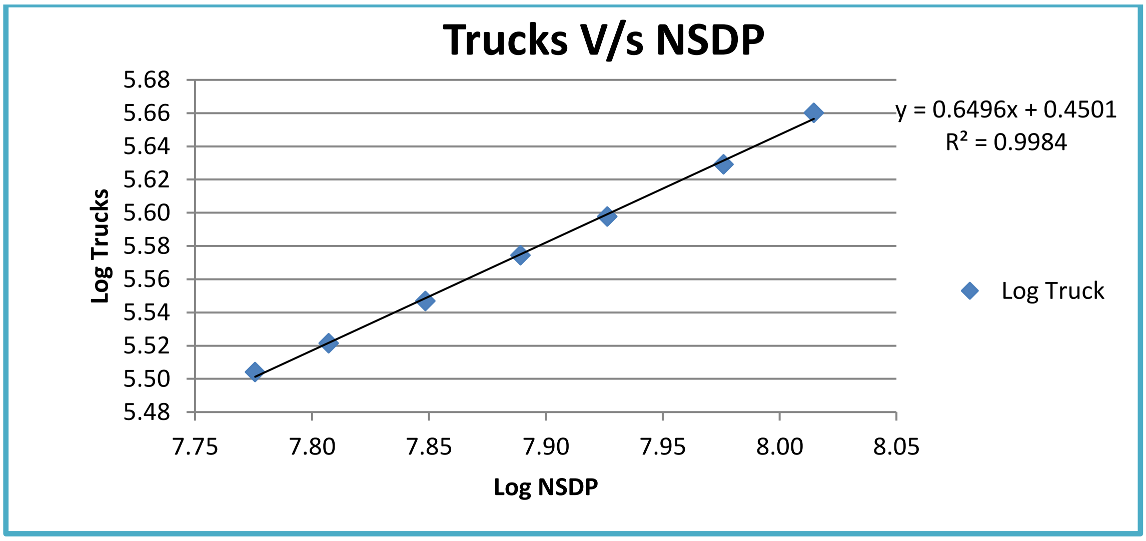


Figure 3-4: Elasticity Regression for Gujarat

It shall be noted that the growth rates for various modes are not same as they are influenced by different parameters. In other words, whilst the growth of the passenger vehicles (cars, Jeeps, two wheelers and even buses) could be attributed to the growth in the per capita income, population growth and vehicle registration growth, the growth of the LCV, Trucks, Multi Axle Trucks are found to be influenced with factors including the industrial production and growth of the National or state Domestic products.

For establishing the elasticity equations, details regarding NSDP/GDP, per capita income, population growth and registered vehicles in the state have been collected for the past few years and are presented in the Annexure. Based on this data, Log-Log regression curve fits have been developed for each type of vehicle with the most suitable parameters and the elasticity values obtained.

The results of these analyses for the good fit as reflected by R^2 values are presented in the table below.

Table 3-1 : Results of Regression Analysis

Results of Regression Analysis					
State	**Vehicle Category**	**Independent Variable**	**Regression Equation**	**R Square**	**Elasticity Coefficient**
GUJRAT	Car/Jeep	PCI	y = 1.3816x - - 0.6381	R^2 = 0.9375	1.3816
	Bus	Population	y = 3.2013x - - 20.0857	R^2 = 0.989	3.2013
	Truck	NSDP	y = 0.6496x - 0.4501	R^2 = 0.9984	0.6496
UTTAR PRADESH	Car/Jeep	PCI	y = 2.3398x - - 4.4661	R^2 = 0.9604	2.3398
	Bus	Population	y = 7.3329x - - 56.1092	R^2 = 0.9859	7.3329
	Truck	NSDP	y = 1.6565x - - 7.7044	R^2 = 0.9682	1.6565
RAJASTHAN	Car/Jeep	PCI	y = 2.3328x - - 5.312	R^2 = 0.9856	2.3328
	Bus	Population	y = 3.2641x - - 20.6548	R^2 = 0.9985	3.2641
	Truck	NSDP	y = 1.4741x - - 5.6285	R^2 = 0.9913	1.4741
HARYANA & PUNJAB	Car/Jeep	PCI	y = 1.667x - - 2.3608	R^2 = 0.9828	1.667
	Bus	Population	y = 4.9905x - - 32.348	R^2 = 0.9908	4.9905
	Truck	NSDP	y = 0.7737x - - 0.2859	R^2 = 0.9857	0.7737

However, considering factors such as proposed developments and other influencing economic factors, and logistic trends etc moderated growth factors as listed below are considered.

3.6 Basis for arriving at growth rates.

Arriving at growth rates for each mode on particular road stretch is always a complex issue. Transportation planners before arriving at such growth rates have to have a comprehensive understanding of the various disciplines such as land use, economy, automobile industry, anticipated changes in the region, traffic, and other related issues.

Giving due consideration to all the factors elaborated in the previous sections, three growth scenarios are suggested with a wide range of growth rates which are resilient and ready to respond to the changes in socio-economic conditions which are likely to influence the project corridor.

3.7 Growth of Economy and Projection of GDP in India and states

After witnessing a slowdown during previous years, the economy is expected to firm up further in coming years. The growth outlook for the Indian economy in the medium and long term remains upbeat and positive. Based on various projections and details available a NSDP growth is taken for various states having influence in traffic.

3.7.1 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle under different scenarios are as following.

Table 3-2 : Recommended Growth Rates Optimistic Scenario

Category / Year	FY24 - FY28	FY29 - FY33	FY34 - FY38	FY39- FY43	FY44 - FY48	FY49 - FY53
Car/Jeep/Van	8.06%	7.16%	6.13%	5.57%	5.57%	5.57%
Mini LCV	3.30%	3.22%	2.85%	2.25%	2.25%	2.25%
Bus	3.29%	2.84%	2.41%	2.21%	2.21%	2.21%
Minibus	3.29%	2.84%	2.41%	2.23%	2.23%	2.23%
LCV	3.30%	2.91%	2.59%	2.25%	2.25%	2.25%
2- Axle	2.83%	2.45%	2.19%	2.06%	2.06%	2.06%
3 - Axle	7.06%	6.28%	5.45%	4.81%	4.81%	4.81%
4 to6 Axle	7.86%	6.93%	6.00%	5.43%	5.43%	5.43%
7 and Above Axle	7.06%	6.28%	5.45%	4.81%	4.81%	4.81%

Table 3-3 : Recommended Growth Rates Pessimistic Scenario

Category / Year	FY24 - FY28	FY29 - FY33	FY34 - FY38	FY39- FY43	FY44 - FY48	FY49 - FY53
Car/Jeep/Van	7.56%	6.66%	5.63%	5.07%	5.07%	5.07%
Mini LCV	2.80%	2.72%	2.35%	1.75%	1.75%	1.75%
Bus	2.79%	2.34%	1.91%	1.71%	1.71%	1.71%
Minibus	2.79%	2.34%	1.91%	1.73%	1.73%	1.73%
LCV	2.80%	2.41%	2.09%	1.75%	1.75%	1.75%
2- Axle	2.33%	1.95%	1.69%	1.56%	1.56%	1.56%
3 - Axle	6.56%	5.78%	4.95%	4.31%	4.31%	4.31%
4 to6 Axle	7.36%	6.43%	5.50%	4.93%	4.93%	4.93%
7 and Above Axle	6.56%	5.78%	4.95%	4.31%	4.31%	4.31%

Table 3-4 : Recommended Growth Rates Most Likely Scenario

Category / Year	FY24 - FY28	FY29 - FY33	FY34 - FY38	FY39- FY43	FY44 - FY48	FY49 - FY53
Car/Jeep/Van	7.81%	6.91%	5.88%	5.32%	5.32%	5.32%
Mini LCV	3.05%	2.97%	2.60%	2.00%	2.00%	2.00%
Bus	3.04%	2.59%	2.16%	1.96%	1.96%	1.96%
Minibus	3.04%	2.59%	2.16%	1.98%	1.98%	1.98%
LCV	3.05%	2.66%	2.34%	2.00%	2.00%	2.00%
2- Axle	2.58%	2.20%	1.94%	1.81%	1.81%	1.81%
3 - Axle	6.81%	6.03%	5.20%	4.56%	4.56%	4.56%
4 to6 Axle	7.61%	6.68%	5.75%	5.18%	5.18%	5.18%
7 and Above Axle	6.81%	6.03%	5.20%	4.56%	4.56%	4.56%

3.8 Traffic Forecast

3.8.1 AADT

In previous chapter base traffic matrix for all category of vehicles have been worked out and presented. This traffic is projected in future years of concession period. Same is given as under.

Table 3-5 : Traffic Forecast at Makhel Toll Plaza (Optimistic)

Year	Car/Jeep/Van	Mini LCV	Bus	Minibus	LCV	2-Axle	3 - Axle	4 to6 Axle	7 and Above Axle	TOTAL
2023-24	1166	96	203	6	98	250	297	7557	10	9683
2024-25	1260	99	210	6	101	257	318	8151	11	10413
2025-26	1362	102	217	6	104	275	354	9143	12	11575
2026-27	1472	105	224	6	107	283	379	9861	13	12450
2027-28	1591	108	231	6	111	291	406	10636	14	13394
2028-29	1705	111	238	6	114	298	431	11374	15	14292
2029-30	1827	115	245	6	117	305	458	12163	16	15252
2030-31	1958	119	252	6	120	312	487	13006	17	16277
2031-32	2098	123	259	6	123	320	518	13908	18	17373
2032-33	2248	127	266	6	127	328	551	14872	19	18544
2033-34	2386	131	272	6	130	335	581	15764	20	19625
2034-35	2532	135	279	6	133	342	613	16710	21	20771
2035-36	2687	139	286	6	136	349	646	17712	22	21983
2036-37	2852	143	293	6	140	357	681	18775	23	23270
2037-38	3027	147	300	6	144	365	718	19901	24	24632
2038-39	3195	150	307	6	147	373	753	20981	25	25937
2039-40	3373	153	314	6	150	381	789	22120	26	27312
2040-41	3561	156	321	6	153	389	827	23320	27	28760
2041-42	3759	160	328	6	156	397	867	24585	28	30286
2042-43	3968	164	335	6	160	405	909	25919	29	31895
2043-44	4189	168	342	6	164	413	953	27325	30	33590
2044-45	4422	172	350	6	168	422	999	28808	31	35378

Table 3-6 : Traffic Forecast at Makhel Toll Plaza (Pessimistic)

Year	Car/Jeep/Van	Mini LCV	Bus	Minibus	LCV	2-Axle	3 - Axle	4 to6 Axle	7 and Above Axle	TOTAL
2023-24	1161	96	202	6	98	249	295	7522	10	9639
2024-25	1249	99	208	6	101	255	314	8076	11	10319
2025-26	1343	102	214	6	104	271	348	9017	12	11417
2026-27	1445	105	220	6	107	277	371	9681	13	12225
2027-28	1554	108	226	6	110	283	395	10394	14	13090
2028-29	1657	111	231	6	113	289	418	11062	15	13902
2029-30	1767	114	236	6	116	295	442	11773	16	14765
2030-31	1885	117	242	6	119	301	468	12530	17	15685
2031-32	2011	120	248	6	122	307	495	13335	18	16662
2032-33	2145	123	254	6	125	313	524	14192	19	17701
2033-34	2266	126	259	6	128	318	550	14973	20	18646

Year	Car/Jeep/Van	Mini LCV	Bus	Minibus	LCV	2-Axle	3 -Axle	4 to6 Axle	7 and Above Axle	TOTAL
2034-35	2393	129	264	6	131	323	577	15797	21	19641
2035-36	2528	132	269	6	134	328	606	16666	22	20691
2036-37	2670	135	274	6	137	334	636	17583	23	21798
2037-38	2820	138	279	6	140	340	667	18550	24	22964
2038-39	2963	140	284	6	142	345	696	19464	25	24065
2039-40	3113	142	289	6	144	350	726	20423	26	25219
2040-41	3271	144	294	6	147	355	757	21429	27	26430
2041-42	3437	147	299	6	150	361	790	22485	28	27703
2042-43	3611	150	304	6	153	367	824	23593	29	29037
2043-44	3794	153	309	6	156	373	859	24755	30	30435
2044-45	3986	156	314	6	159	379	896	25974	31	31901

Table 3-7 : Traffic Forecast at Makhel Toll Plaza (Most Likely)

Year	Car/Jeep/Van	Mini LCV	Bus	Minibus	LCV	2-Axle	3 -Axle	4 to6 Axle	7 and Above Axle	TOTAL
2023-24	1163	96	203	6	98	249	296	7539	10	9660
2024-25	1254	99	209	6	101	255	316	8113	11	10364
2025-26	1352	102	215	6	104	272	351	9079	12	11493
2026-27	1458	105	222	6	107	279	375	9770	13	12335
2027-28	1572	108	229	6	110	286	401	10513	14	13239
2028-29	1681	111	235	6	113	292	425	11216	15	14094
2029-30	1797	114	241	6	116	298	451	11966	16	15005
2030-31	1921	117	247	6	119	305	478	12766	17	15976
2031-32	2054	120	253	6	122	312	507	13619	18	17011
2032-33	2196	124	260	6	125	319	538	14529	19	18116
2033-34	2325	127	266	6	128	325	566	15364	20	19127
2034-35	2462	130	272	6	131	331	595	16247	21	20195
2035-36	2607	133	278	6	134	337	626	17181	22	21324
2036-37	2760	136	284	6	137	344	659	18169	23	22518
2037-38	2922	140	290	6	140	351	693	19214	24	23780
2038-39	3077	143	296	6	143	357	725	20209	25	24981
2039-40	3241	146	302	6	146	363	758	21255	26	26243
2040-41	3413	149	308	6	149	370	793	22355	27	27570
2041-42	3594	152	314	6	152	377	829	23512	28	28964
2042-43	3785	155	320	6	155	384	867	24729	29	30430
2043-44	3986	158	326	6	158	391	907	26009	30	31971
2044-45	4198	161	332	6	161	398	948	27355	31	33590

CHAPTER 4

FORECAST OF TOLL REVENUE

4.1 General

This chapter presents the estimates of traffic forecast, tolling categories, tolling rate calculations and toll revenue of the project.

4.2 Toll Rate Guidelines

As per the Toll Notification (Schedule R) the following acts and rules have been considered:

- National Highways Fee (Determination of Rates and Collection) Rules, 2008
- National Highways Fee (Determination of Rates and Collection) Amendment Rules, 2010
- National Highways Fee (Determination of Rates and Collection) Amendment Rules, 2011
- National Highways Fee (Determination of Rates and Collection) Amendment Rules, 2013 (Rate of fee for expressway shall be 1.25 times the normal rate)
- National Highways Fee (Determination of Rates and Collection) Amendment Rules, 2014 (Equivalent length of structure)

4.2.1 Discounts

As per the Fee Notification (Schedule-R) fee discounts shall be provided to project users as under

- Local discount for non-commercial vehicle owner with in 20 km of toll plaza

4.2.2 Travel Passes

As per the Fee Notification (Schedule-R) fee discounts shall be provided to project users as under

1. <u>Monthly Pass:</u> For frequent user's monthly pass would have not more than 50 trips per month at 2/3rd rate
2. <u>Daily Pass (for Return Trip):</u> A 75% discount will be offered on the return trip.

3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.

4.3 Estimation of Toll Rates

As per the notification issued with RFP the following Base rate of fee for the categories mentioned are applicable as base rate.

Table 4-1 : Base Toll Rates 2007 - 08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (2 Axle)	2.2
Three Axle commercial vehicles	2.4
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4-6 axles)	3.45
Oversized Vehicle (seven or more axles)	4.2

These rates are then modified for as per procedure provided in guidelines of notification considering factors listed below.

- Annual revision of fee rate - @3%
- Application of WPI

Base rates have been worked out to map the current rates. These shall be updated when more details come in. Base toll rates are given as under.

Table 4-2 : Toll Rates for Base Year 2022-23 (Rs. Rupees)

Sr.no	Type of Vehicle	Rates
1	Car/Jeep/Van	125
2	Mini LCV	125
3	Bus	425
4	Minibus	200
5	LCV	200
6	2- Axle	425
7	3 - Axle	460
8	4 to6 Axle	665
9	7 and Above Axle	805

Above rates are applicable for base year 2022-23. These rates have been escalated for future year as NHAI policy and MORTH guideline for future revenue working.

Table 4-3 : Toll Rates for Forecasting Year (Rs. Rupees)

Year	Car/Jeep/ Van	Mini LCV	Bus	Minibus	LCV	2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle
2023-24	100	100	335	160	160	335	365	520	635
2024-25	100	100	335	160	160	335	365	520	635
2025-26	145	145	485	230	230	485	530	760	925
2026-27	150	150	510	245	245	510	555	795	970
2027-28	160	160	535	255	255	535	580	835	1020
2028-29	165	165	560	270	270	560	610	880	1070
2029-30	175	175	590	280	280	590	645	925	1125
2030-31	185	185	620	295	295	620	675	975	1185
2031-32	195	195	650	310	310	650	710	1025	1245
2032-33	205	205	685	325	325	685	750	1075	1310
2033-34	215	215	720	345	345	720	785	1130	1380
2034-35	225	225	760	365	365	760	830	1190	1450
2035-36	235	235	800	380	380	800	870	1255	1525
2036-37	250	250	840	400	400	840	920	1320	1605
2037-38	260	260	885	425	425	885	965	1390	1690
2038-39	275	275	935	445	445	935	1020	1465	1780
2039-40	290	290	985	470	470	985	1075	1540	1880
2040-41	305	305	1035	495	495	1035	1130	1625	1980
2041-42	325	325	1090	520	520	1090	1190	1715	2085
2042-43	340	340	1150	550	550	1150	1255	1805	2200

Year	Car/Jeep/ Van	Mini LCV	Bus	Minibus	LCV	2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle
2043-44	360	360	1215	580	580	1215	1325	1905	2315
2044-45	380	380	1280	610	610	1280	1395	2005	2445

4.3.1 Revenue Forecast

Base case revenue forecast with traffic numbers as per above analysis and rates worked out is give in following table.

Table 4-4 : Total Toll Revenue – Base Case Rs. Cr (Optimistic)

Location / Year	Makhel Toll	Total
2023-24	153.67	153.67
2024-25	165.01	165.01
2025-26	206.59*	206.59*
2026-27	303.47	303.47
2027-28	344.28	344.28
2028-29	386.15	386.15
2029-30	433.67	433.67
2030-31	488.13	488.13
2031-32	549.63	549.63
2032-33	614.25	614.25
2033-34	683.65	683.65
2034-35	762.44	762.44
2035-36	853.46	853.46
2036-37	948.50	948.50
2037-38	1057.41	1057.41
2038-39	1174.30	1174.30
2039-40	1304.28	1304.28
2040-41	1445.57	1445.57
2041-42	1607.51	1607.51
2042-43	1782.35	1782.35
2043-44	1987.44	1987.44
2044-45	2198.10	2198.10

Note: * *revenue is based on an assumption that construction is completed in H1FY26*

Table 4-5 : Total Toll Revenue – Base Case Rs. Cr (Pessimistic)

Location / Year	Makhel Toll	Total
2023-24	152.96	152.96
2024-25	163.49	163.49
2025-26	203.74*	203.74*
2026-27	297.93	297.93
2027-28	336.43	336.43
2028-29	375.55	375.55
2029-30	419.77	419.77
2030-31	470.29	470.29
2031-32	527.03	527.03
2032-33	586.21	586.21
2033-34	649.41	649.41
2034-35	720.84	720.84
2035-36	803.15	803.15
2036-37	888.37	888.37
2037-38	985.70	985.70
2038-39	1089.45	1089.45
2039-40	1204.26	1204.26
2040-41	1328.37	1328.37
2041-42	1470.27	1470.27
2042-43	1622.49	1622.49
2043-44	1800.61	1800.61
2044-45	1981.93	1981.93

Note: *: *revenue is based on an assumption that construction is completed in H1FY26*

Table 4-6 : Total Toll Revenue – Base Case Rs. Cr (Most Likely)

Location / Year	Makhel Toll	Total
2023-24	153.30	153.30
2024-25	164.23	164.23
2025-26	205.12*	205.12*
2026-27	300.65	300.65
2027-28	340.29	340.29
2028-29	380.77	380.77
2029-30	426.64	426.64
2030-31	479.11	479.11

Location / Year	Makhel Toll	Total
2031-32	538.19	538.19
2032-33	600.07	600.07
2033-34	666.31	666.31
2034-35	741.31	741.31
2035-36	827.88	827.88
2036-37	917.90	917.90
2037-38	1020.91	1020.91
2038-39	1131.08	1131.08
2039-40	1253.26	1253.26
2040-41	1385.77	1385.77
2041-42	1537.38	1537.38
2042-43	1700.55	1700.55
2043-44	1891.77	1891.77
2044-45	2087.20	2087.20

Note: *: *revenue is based on an assumption that construction is completed in H1FY26*

4.3.2 Analysis of actual toll collection on the Project stretch

We have collated Fastag toll collection data for 9MFY23 on the project stretch through our sources, analysis of which is as summarized below:

Particulars	Amount (in INR crores)
Fastag Collection	
April 2022	11.99
May 2022	14.73
June 2022	13.69
July 2022	12.95
August 2022*	11.44
September 2022*	11.92
October 2022	13.73
November 2022	15.18
December 2022	15.85
Total Fastag Collection (excluding August and September)	98.12
Fastag per day collection	INR 46 lakhs
Total per day collection (Fastag + cash) assuming Fastag penetration of 90-92%	INR 50 – 51 lakhs
Base year Toll Collection as per traffic study (FY23)	**INR~ 50 lakhs**

**The months of August and September 2022 were impacted due to shut down of Morbi Tile Cluster which is one of the major traffic drivers on the project stretch. As this was one of a kind event, such shutdowns are not expected to occur in the future. Accordingly, for normalizing the assessment of actual toll* *collections, we have excluded the toll collections for the months of August and September 2022 from our analysis.*

As can be seen from the above, actual toll collection on the project stretch in FY23 is in line with our base year traffic revenue for FY23 which further substantiates the accuracy of our traffic study.

4.3.3 Modifications in concession period

Modification is concession period due to variation in traffic is worked out as per procedure given in RFP. There are three milestones for traffic testing in year 2028, 2033 and 2038. Working of modification in concession period is given as under for all scenarios.

- Appointed date – 28th December 2023
- Concession Period (Days) – 7300 (For 20 Years)
- Hence, Original Concession end date is – 23rd December 2043

Pessimistic Case

Sr. No	Target Date	Target Traffic	Actual Traffic	Variation in CP as per CA %	Change in CP (Days	Total Variation in CP Years
1	01-Oct-28	58741	54607	2.04%	113	**0.3**
2	01-Oct-33	73443	73443	0.00%	0	
3	01-Oct-38	93731	95001	0.00%	0	

Optimistic Case

Sr. No	Target Date	Target Traffic	Actual Traffic	Variation in CP as per CA %	Change in CP (Days	Total Variation in CP Years
1	01-Oct-28	58741	56148	0.00%	0	**- 0.1**
2	01-Oct-33	74971	77313	0.00%	0	
3	01-Oct-38	95681	102401	-2.02%	-39	

Most Likely Case

Sr. No	Target Date	Target Traffic	Actual Traffic	Variation in CP as per CA %	Change in CP (Days	Total Variation in CP Years
1	01-Oct-28	58741	55366	0.75%	41	**0.1**
2	01-Oct-33	74412	75352	0.00%	0	
3	01-Oct-38	94968	98631	0.00%	0	

Hence a positive variation of about **113 days** in concession period is expected as per traffic projections in *Pessimistic case*.

41 days in concession period is expected as per traffic projections in *most Likely case*.

CHAPTER 5

STRENGTH WEAKNESS OPPORTUNITY & THREAT (SWOT)

5.1 Introduction

SWOT analysis (alternately SLOT analysis) is a strategic planning method used to evaluate the Strengths, Weaknesses/Limitations, Opportunities, and Threats involved in a project or in a business venture. It involves specifying the objective of project and identifying the internal and external factors that are favourable and unfavourable to achieve that objective.

5.2 SWOT Analysis

Every project has its own strength and weaknesses. There are certain non-quantifiable parameters which can make project attractive or unattractive. An attempt has been made to capture these parameters for project highway to get complete review of project for making a management decision. For this purpose, a SWOT (Strength-Weakness-Opportunity-Threat) analysis has been done for project highway and is presented as below.

- **STRENGTH**

- Operational and has good tolling history.
- There no competing road network. Rail line along the alignment prohibits such developments of radial roads.
- Feeder to Major port of Kandla and biggest private port Mundra
- Stable long-distance traffic
- Morbi tile industry a very good feeder of commercial long-distance traffic in influence area.
- Peaceful tolling operations
- Toll plaza at confluence of central and north India Traffic connectors.

- **WEAKNESS**

- Local traffic almost absent and major dependence on port activities for traffic. Any disruption in port functioning impacts traffic volume at toll plaza.

- **OPPORTUNITY**

- Amritsar – Jamnagar Expressway may bring some additional traffic to project road.
- Development of Barmer refinery would positively impact traffic on Project stretch.

- **THREAT**

- Both Kandla and Mundra Ports handle large volumes of bulk. Commissioning of DFCC and conversion of Palanpur – Kandla rail line to double gauge may take away some traffic from project stretch. DFCC is operational though in stretch. Hence some part of traffic settlement has already taken place.

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FOUR LANE LALITPUR- SAGAR- LAKHNADON SECTION (FROM KM 99+005 TO KM 415+089) OF NH-44 (OLD NH-26) IN THE STATES OF UTTAR PRADESH & MADHYA PRADESH

(TOT BUNDLE-12)

MARCH 2024

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic
BOT	-	Build Operate Transfer
CAGR	-	Compound Annual Growth Rate
CTV	-	Classified traffic volume
DBFOT	-	Design, Build, Finance, Operate & Transfer
EME	-	Earth Moving Equipment
GDP	-	Gross Domestic Product
GSDP	-	Gross State Domestic Product
HCM	-	Heavy Construction Machinery
HCV	-	Heavy Commercial Vehicle
HTMS	-	Highway Traffic Management System
IRC	-	Indian Road Congress
IRR	-	Internal Rate of Return
LCV	-	Light Commercial Vehicle
LHS	-	Left Hand Side
LGV	-	Light Goods Vehicle
MAV	-	Multi Axle Vehicle
MORTH	-	Ministry of Road Transport and Highways
NH	-	National Highway
PCC	-	Plain Cement Concrete
CR	-	Coarse Rubble
NHAI	-	National Highway Authority of India
NHDP	-	National Highways Development Project
NSDP	-	Net State Domestic Product
O&M	-	Operation & Maintenance
PCDP	-	Per Capita Domestic Product
PCI	-	Per Capita Income
PCU	-	Passenger Car Unit
PSC	-	Pre-stressed Concrete
RCC	-	Reinforced cement concrete
RHS	-	Right Hand Side
SH	-	State Highway
TP	-	Toll Plaza
WPI	-	Wholesale Price Index
SIR	-	Special Investment Region
c.	-	Circa
ROB	-	Railway Over Bridge
MDR	-	Major District Road
ODR	-	Other District Road
CA	-	Concession Agreement
RMT	-	Running Meter

CHAPTER 1

INTRODUCTION

1.1 Background

The National Highways Authority of India (NHAI) introduced the Toll, Operate and Transfer (TOT) model for partnership with private developers in the road sector. Under this model, NHAI passes on the toll collection rights and operation and maintenance obligations for 20 years to the private developer against payment of upfront, one-time, lump sum concession fees quoted by the private developer as part of the comprehensive bidding process. Projects under this model are awarded as a bundle of operational national highways, which allows the investor to offset the risks of one project against another. Since existing and operational roads are auctioned under the TOT model.

Under the Toll Operate and Transfer (ToT) 12 bundle, NHAI had invited tenders for selection of concessionaire for maintenance of the National Highway stretch Lalitpur-Sagar-Lakhnadon from Km 99.00 to Km 415.089 section of NH-44 (old NH26).

M/s. IRB Infrastructure Developers Limited., has been declared as the selected bidder for the project. This report is for ToT bundle 12 “Lalitpur-Sagar- Lakhnadon from Km 99.00 to Km 415.089 section of NH-44 spanning in the states of Uttar Pradesh and Madhya Pradesh. Project Highway alignment is depicted in the following figure.

Figure 1-1: Project Stretch of TOT Bundle 12

1.2 Objective of the Study

M/s IRB Infrastructure Developers Limited (IRB) intends to develop a traffic study report for Four Laning of Lalitpur-Sagar- Lakhnadon from Km 99.00 to Km 415.089 section of NH-44 on BOT basis. GMD Consultants have been assigned the work of conducting traffic study and developing revenue model based on traffic projections and forecast.

For making the proper assessment of traffic volume on project stretch, base year traffic and its projection, GMD Consultants have been provided with the basic survey and investigation report available with client. The base year traffic data is the primary input for determination of future traffic demand. With a view to estimate the base year traffic volume in different categories of goods and passenger carrying vehicles, the Classified Traffic Volume Count (CTVC) surveys, Turning Movement surveys (TMC), Registration Plate Survey (N.P.) & Origin-Destination (O-D) were conducted at Main Toll Plaza (MTP) and data of same is provided for study.

The year 2022-23 has been taken as the base year for projections and forecasting of traffic in the horizon year. This report fulfils part of the requirement of the assignment.

1.3 Scope of Services

The following may be referred to as broad scope of Traffic Study of Four Laning of Lalitpur-Sagar- Lakhnadon from Km 99.00 to Km 415.089 section of NH-44.

- Classified Traffic Volume Count at main toll plaza location at Toll Plaza locations. This data was supplied by the Concessionaire.
- Establishment of traffic pattern
- Working our traffic demand elasticity and growth
- Traffic forecast up to concession period.
- Preparation of revenue model up to concession period
- Any other analysis relevant to scope

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

The project stretch is a section of NH-44, which is the longest National Highway in the country, running through North, Central and South India. It starts from Jammu & Kashmir and passes through the states of Punjab, Haryana, Delhi, Uttar Pradesh, Rajasthan, Madhya Pradesh, Maharashtra, Telangana, Andhra Pradesh, Karnataka and Tamil Nadu.

Project Stretch Description

The project stretch under this study starts from km 99.005 of NH-44 at Lalitpur in the state of Uttar Pradesh and ends at km 415.089 of NH-44 at Lakhnadon in the state of Madhya Pradesh. The length of project stretch is 316.084 km and has 4-lane configuration with four number of Toll Plazas (Malthone at ch.142+319, Chitora at Ch. 226+740, Titarpani at 295+000 and Bakori (Bachai) at ch.357+739).

The following figure shows this the alignment of the project highway in above context.

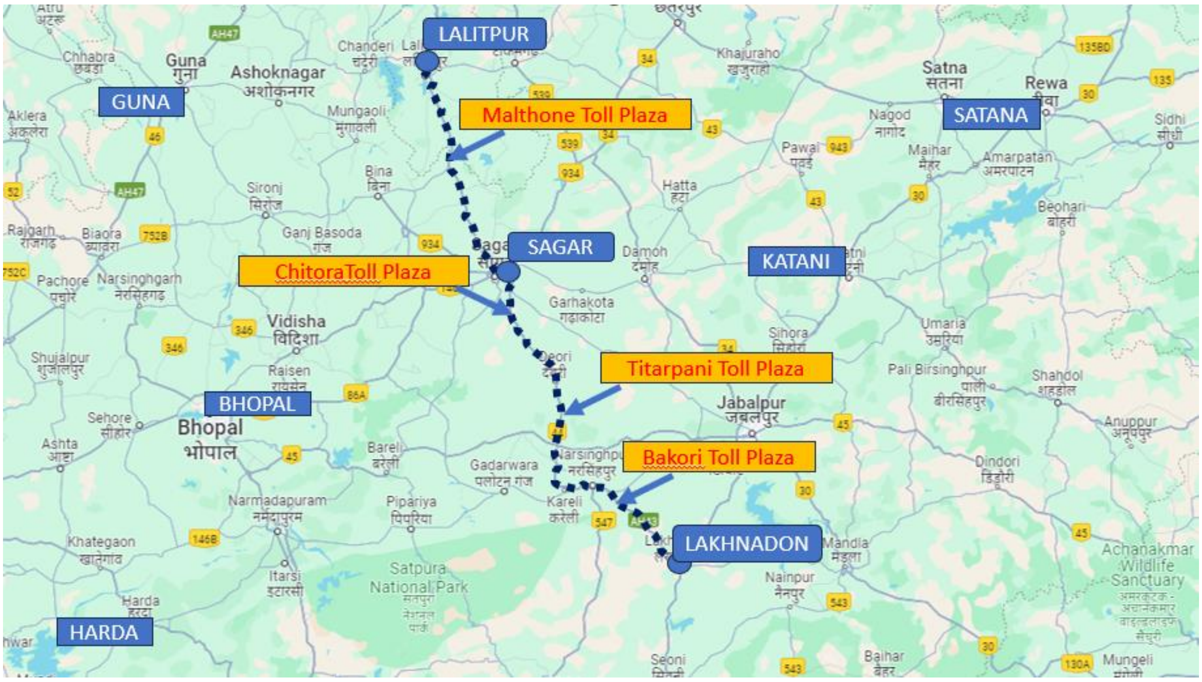

Figure 2-1 : Project Alignment with Toll Plaza

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Lalitpur – Sagar - Lakhnadon section of NH-44- Provided by Concessionaire for base year 2022-23.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	**Km 142.319 Toll Plaza at Malthone**	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23
2	**Km 226.740 Toll Plaza at Chitora**	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23
3	**Km 295.000 Toll Plaza at Titarpani**	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23
4	**Km 357.739 Toll Plaza at Bakori**	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23	AADT from previous traffic study report for year 2022-23

All toll plazas are located in Madhya Pradesh.

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations-based traffic survey done at project stretch.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below .

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Minibus /LCV
- Bus
- Truck /
- 3 Axle commercial vehicle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data as per traffic survey conducted at toll plaza locations. It may not represent the whole year traffic as this pertains to specific period only. Hence a seasonality factor has been applied to average traffic of current period to arrive at

Annual Average Daily Traffic of base year 2022-23. Same corrected traffic is used for future projections and revenue calculations. Following table shows Annual Average Daily Traffic (AADT) for Base year 2022-23 as considered.

Table 3-3 : Traffic Data at Malthone Toll Plaza at Km 142.319

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.) 2022-23
1	Car	1672
2	Minibus /LCV	191
3	Bus	61
4	Truck	995
5	3-Axle Commercial vehicle	1221
6	Multi axle	1448
7	Oversize Vehicle	1
	Total	**5589**

Table 3-4 : Traffic Data at Chitora Toll Plaza at Km 226.740

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.) 2022-23
1	Car	1776
2	Minibus /LCV	418
3	Bus	134
4	Truck	1062
5	3-Axle Commercial vehicle	1314

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.) 2022-23
6	Multi axle	1662
7	Oversize Vehicle	1
	Total	**6,367**

Table 3-5 : Traffic Data at Titarpani Toll Plaza at Km 295.000

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.) 2022-23
1	Car	1387
2	Minibus /LCV	479
3	Bus	108
4	Truck	1102
5	3-Axle Commercial vehicle	1369
6	Multi axle	1681
7	Oversize Vehicle	1
	Total	**6,127**

Table 3-6 : Traffic Data at Bakori Toll Plaza at Km 357.739

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.) 2022-23
1	Car	1086
2	Minibus /LCV	444
3	Bus	78
4	Truck	1015
5	3-Axle Commercial vehicle	1207
6	Multi axle	1501
7	Oversize Vehicle	2
	Total	**5,333**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in “IRC-64-1990: Guidelines for Capacity of Roads in Rural areas”. The adopted passenger car unit values (PCU) are presented in Table 3-7.

Table 3-7 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5

Vehicle Type	PCUs
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-8 : Traffic in PCU at Project Stretch

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2022 – 2023 (Base Year)	Km 142.319 Toll Plaza at Malthone	5589	15310	2.74
	Km 226.740 Toll Plaza at Chitora	6367	17417	2.74
	Km 295.000 Toll Plaza at Titarpani	6127	17412	2.84
	Km 357.739 Toll Plaza at Bakori	5333	15416	2.89

It can be observed from above that project traffic has PCU index 2.5 to 3 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at four toll plaza locations.

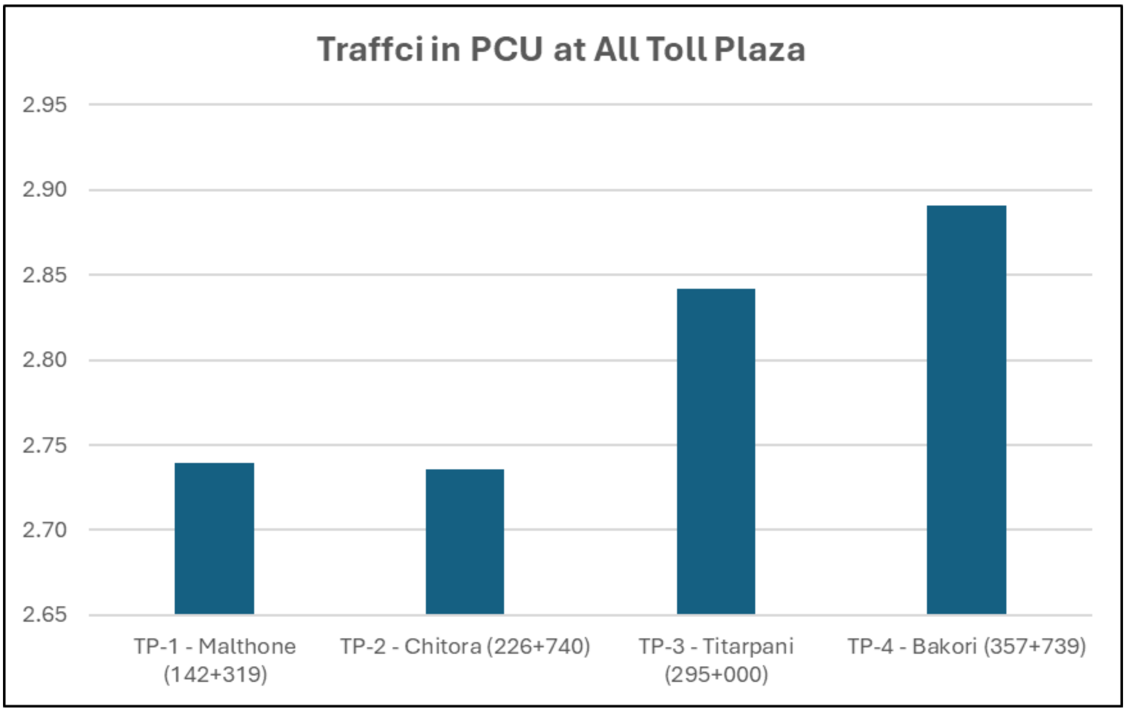

Figure 3-1 : Comparison of PCU Index

It can be observed that PCU index is consistent at all four toll plaza locations.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

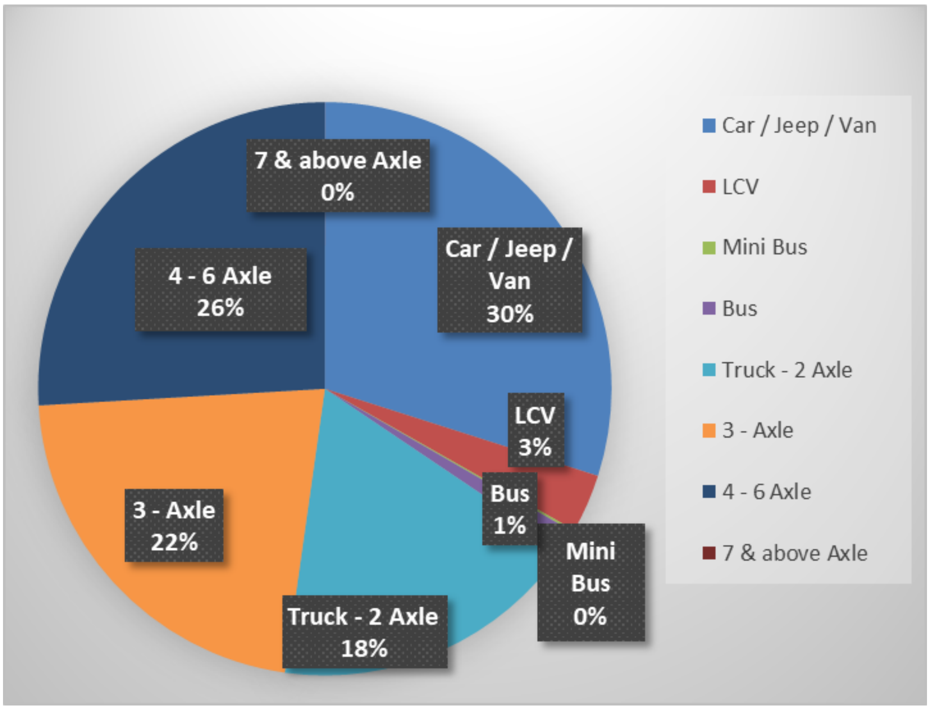

Figure 3-2: Model split of tollable vehicle @ Km 142.319

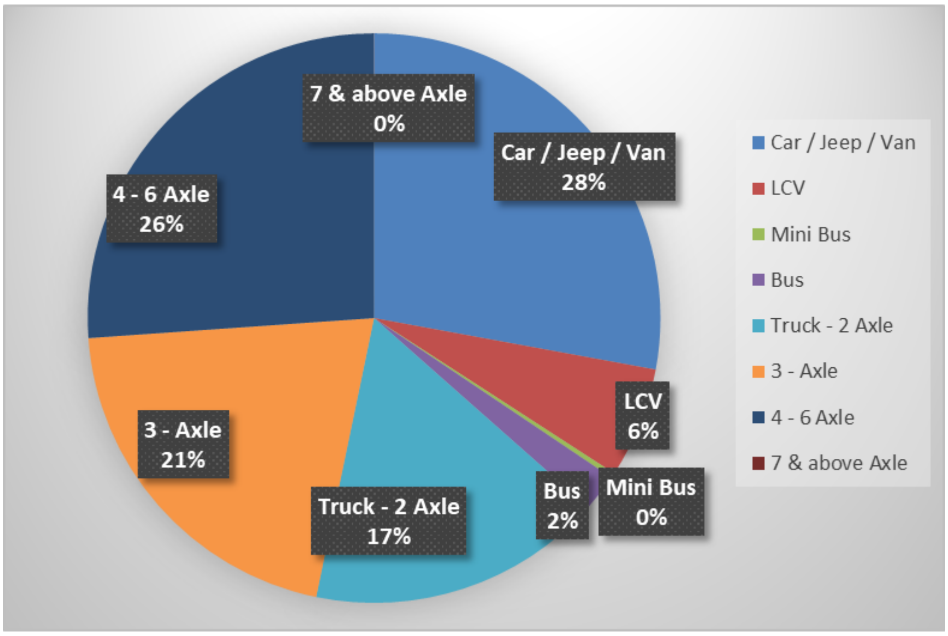

Figure 3-3: Model split of tollable vehicle @ Km 226.740

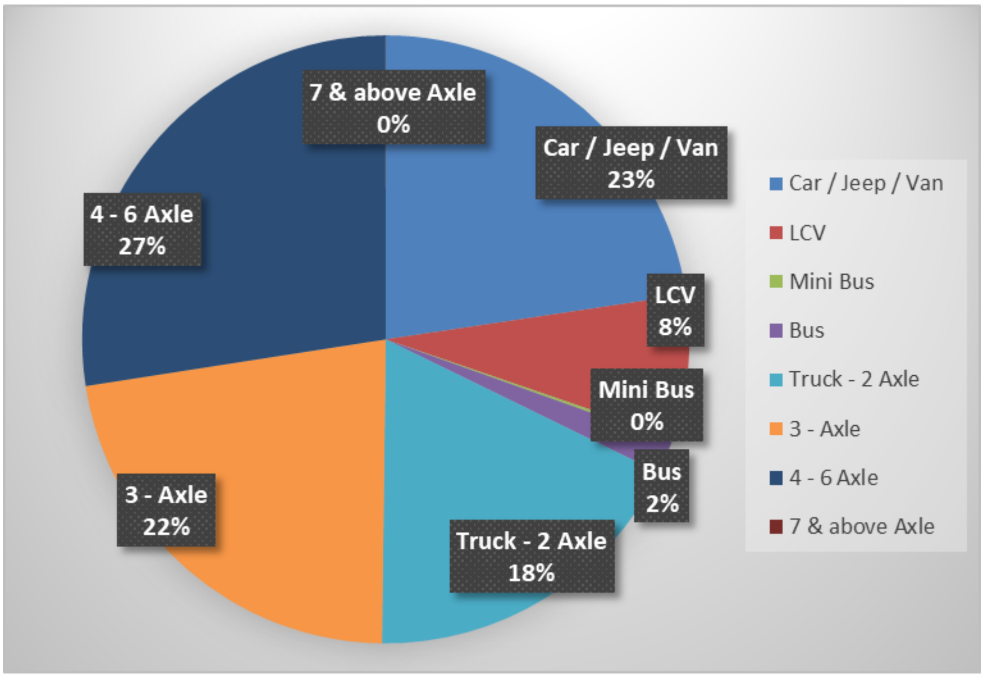

Figure 3-4: Model split of tollable vehicle @ Km 295.000

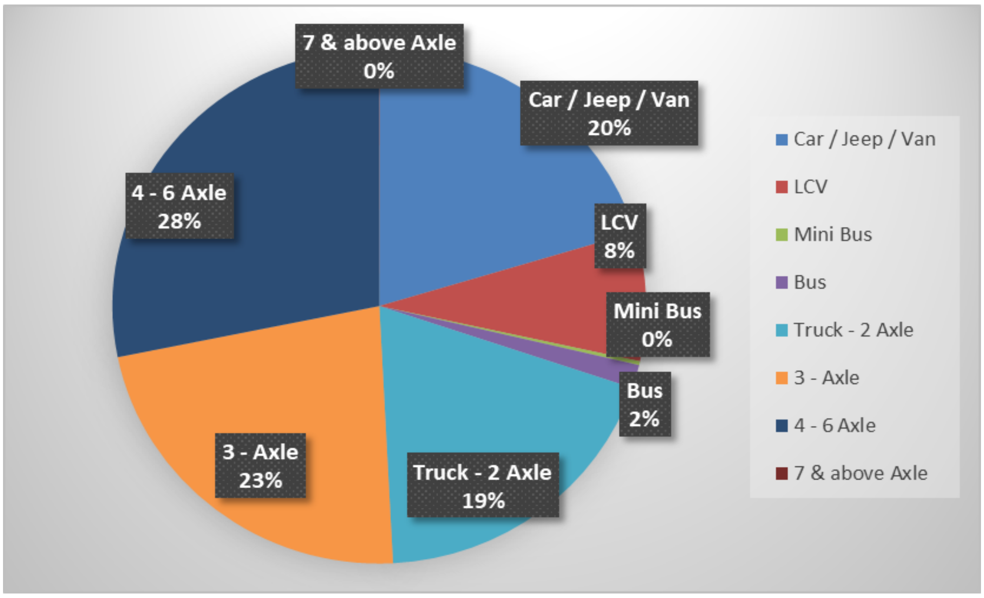

Figure 3-5: Model split of tollable vehicle @ Km 357+739

It is observed that car traffic forms about 30% of total traffic at toll plaza location KM 142.319 while multi axle commercial vehicles are about 48% of total traffic. Truck / Bus and LCV share about 19% and 3% of traffic volume respectively.

It is observed that car traffic forms about 28% of total traffic at toll plaza location KM 226.740 while multi axle commercial vehicles are about 47% of total traffic. Truck / Bus and LCV share about 19% and 6% of traffic volume respectively.

It is observed that car traffic forms about 23% of total traffic at toll plaza location KM 295.000 while multi axle commercial vehicles are about 49% of total traffic. Truck / Bus and LCV share about 20% and 8% of traffic volume respectively.

It is observed that car traffic forms about 20% of total traffic at toll plaza location KM 357.739 while multi axle commercial vehicles are about 51% of total traffic. Truck / Bus and LCV share about 21% and 8% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

Since actual traffic data for bifurcation of journey is not available with Concessionaire, as the project has very recently been awarded, journey type bifurcation is adopted from traffic survey data provided by Concessionaire. For the purpose of calculating revenue all return journeys and monthly passes are converted to single journey type by suitable Daily Pass / Monthly Pass Factors (DPMP factor). The following table shows DP/MP factors adopted for each toll plaza on project stretch.

Table 3-9 : Journey Type factor at Malthone Toll Plaza KM 142.319

Sr. No	Type of Vehicles	DP/MP Factors
		2022-23
1	Car / Jeep / Van	0.90
2	LCV	0.98
3	Minibus	0.85
4	Bus	0.85
5	Truck - 2 Axle	0.99
6	3 - Axle	1.00
7	4 - 6 Axle	0.99
8	7 & above Axle	0.99

Table 3-10 : Journey Type factor at Chitora Toll Plaza KM 226.740

Sr. No	Type of Vehicles	DP/MP Factors
		2022-23
1	Car / Jeep / Van	0.85
2	LCV	0.80
3	Minibus	0.85
4	Bus	0.85
5	Truck - 2 Axle	0.98
6	3 - Axle	0.99
7	4 - 6 Axle	0.99
8	7 & above Axle	0.99

Table 3-11 : Journey Type factor at Titarpani Toll Plaza KM 295.000

Sr. No	Type of Vehicles	DP/MP Factors
		2022-23
1	Car / Jeep / Van	0.95
2	LCV	0.87
3	Minibus	0.87
4	Bus	0.85
5	Truck - 2 Axle	0.98
6	3 - Axle	0.97
7	4 - 6 Axle	0.99
8	7 & above Axle	1.00

Table 3-12 : Journey Type factor at Bakori Toll Plaza KM 357.739

Sr. No	Type of Vehicles	DP/MP Factors
		2022-23
1	Car / Jeep / Van	0.95
2	LCV	0.87
3	Minibus	0.87
4	Bus	0.85
5	Truck - 2 Axle	0.98
6	3 - Axle	0.97
7	4 - 6 Axle	0.99
8	7 & above Axle	0.99

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth

e) Industrial Growth
f) Special Industry Potential
g) Regional and National development vision / plan
h) Any other relevant data

3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor. Same is discussed in subsequent chapter.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Regional Network

Project road is in existence for long and traffic is almost settled. However, there are a few upcoming corridors which may have interest in project road catchments. These are discussed below.

Delhi – Mumbai Expressway - The access controlled greenfield expressway connects Delhi and Mumbai (up to Jawaharlal Nehru Port Trust) and passes through states of Haryana, Rajasthan, Madhya Pradesh, Gujarat and Maharashtra. DME alignment will largely cater to traffic between North of India and Gujarat/Western Maharashtra and is not likely to affect traffic on the project road which caters to traffic on NH-44 which is north south highway. Hence it is not likely to impact project road traffic.

Surat – Chennai Expressway - The alignment will largely cater to traffic between states of Gujarat and Central Maharashtra /Andhra Pradesh/ Telangana/Karnataka/Tamilnadu and is not parallel to Project Road. Therefore, it is not likely to affect traffic on the project road.

Pune – **Bangalore Expressway** – Entire catchment of this proposed expressway falls south of project road. It is not likely to affect the project road traffic.

All other major highways in the region exist and traffic is settled in the region. On the local level also, there is no formidable competing route network. Hence it is not envisaged that there will be any major impact on project road traffic in the near future due to regional or local network developments.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor of Lalitpur-Sagar- Lakhnadon from Km 99.00 to Km 415.089 section of NH-44 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-12015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = *k x Log (EI) + A*

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Madhya Pradesh & Uttar Pradesh. Toll plazas at Malthone, Chitora, Titarpani and Bakori are in the state of Madhya Pradesh. Project traffic has share of majorly states like Madhya Pradesh, Uttar Pradesh and Rajasthan. For elasticity calculations, working data from these states also has been analysed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Maharashtra State.

Table 5-1 : Per Capita Income Vs Car Madhya Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	38497	424644	4.59	5.63		
2012	41142	493412	4.61	5.69	7%	
2013	42548	555461	4.63	5.74	3%	
2014	44027	637626	4.64	5.80	3%	
2015	47351	820391	4.68	5.91	8%	
2016	52782	869777	4.72	5.94	11%	
2017	54829	982124	4.74	5.99	4%	
2018	57401	1087124	4.76	6.04	5%	5.9%

Regression analysis of same is given in figure below

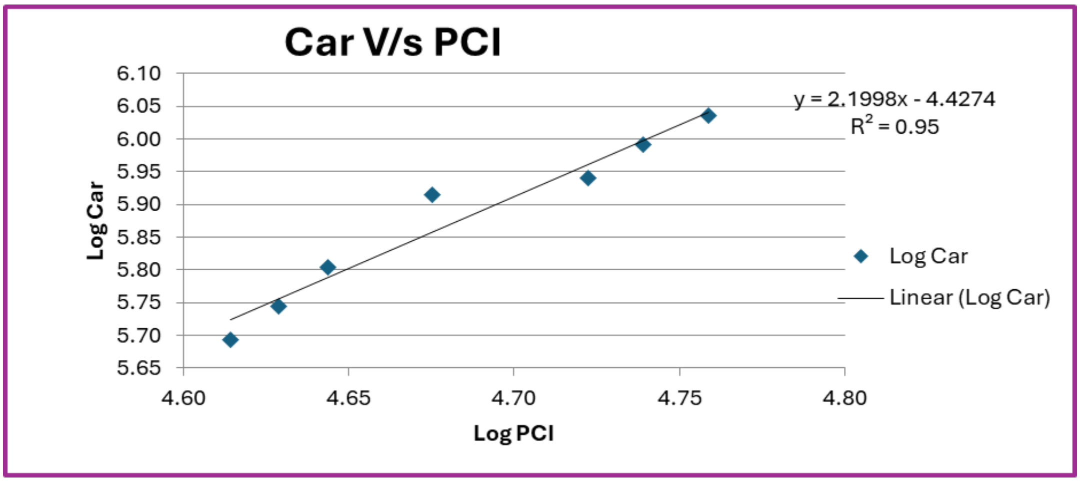

Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Madhya Pradesh

Table 5-2 : Population Vs Bus Madhya Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	72627000	181770	7.86	5.26		
2012	73863000	208530	7.87	5.32	2%	
2013	75099000	233569	7.88	5.37	2%	
2014	76334000	277898	7.88	5.44	2%	
2015	77570000	322227	7.89	5.51	2%	
2016	78806000	347227	7.90	5.54	2%	
2017	79948000	382227	7.90	5.58	1%	
2018	81090000	402227	7.91	5.60	1%	1.6%

Regression analysis of same is given in figure below

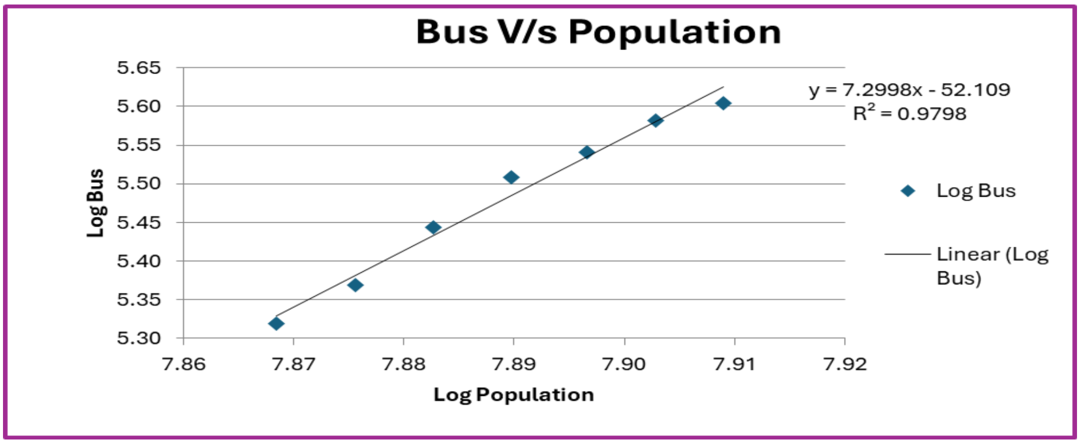

Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Madhya Pradesh

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-3 : Trucks Traffic Vs NSDP Madhya Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	28237104	121916	7.45	5.09		
2012	30685334	131098	7.49	5.12	9%	
2013	32259760	137815	7.51	5.14	5%	
2014	33924690	150921	7.53	5.18	5%	
2015	37071567	177352	7.57	5.25	9%	
2016	41946525	233553	7.62	5.37	13%	
2017	44200243	289754	7.65	5.46	5%	
2018	46928896	326291	7.67	5.51	6%	7.6%

Following figure depict regression analysis and extrapolation.

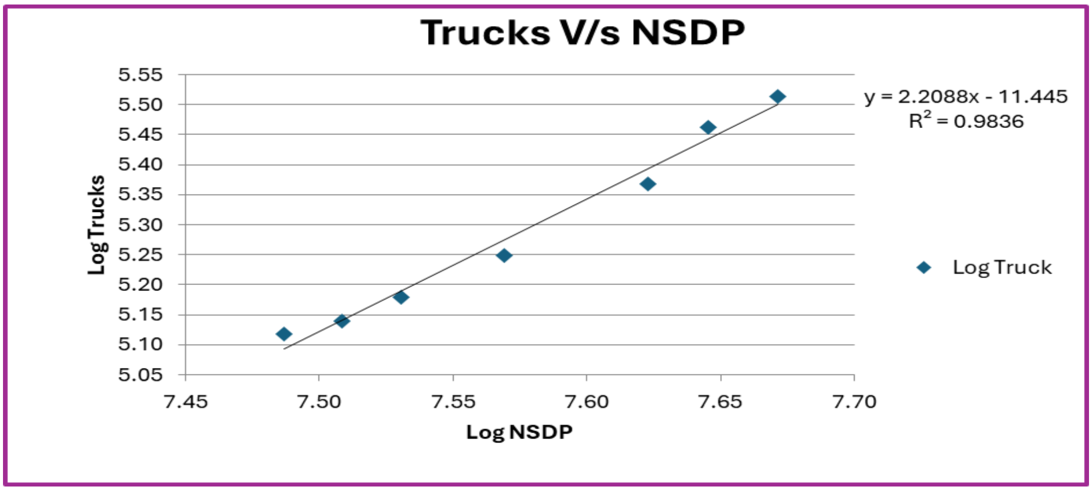

Figure 5-3 : Regression and Elasticity Trucks vs. NSDP – Extrapolation Madhya Pradesh

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-4 : Summary Regression Analysis Madhya Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
MADHYA PRADESH	**Car/Jeep**	PCI	y = 2.2965x - - 4.8829	R^2 = 0.9634	2.3	6%	13.57%	Good Regression
	Bus	Population	y = 7.4978x - - 53.6722	R^2 = 0.9862	7.5	2%	11.90%	Good Regression
	Truck	NSDP	y = 2.2088x - - 11.4451	R^2 = 0.9694	2.2	8%	16.70%	Good Regression

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Uttar Pradesh State.

Table 5-5 : Per Capita Income Vs Car Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	32002	1108100	4.51	6.04		
2012	32908	1205374	4.52	6.08	3%	
2013	34044	1423020	4.53	6.15	3%	
2014	34583	1572217	4.54	6.20	2%	
2015	36973	1746117	4.57	6.24	7%	
2016	40847	2027972	4.61	6.31	10%	
2017	41832	2195783	4.62	6.34	2%	
2018	43670	2439845	4.64	6.39	4%	4.6%

Regression analysis of same is given in figure below

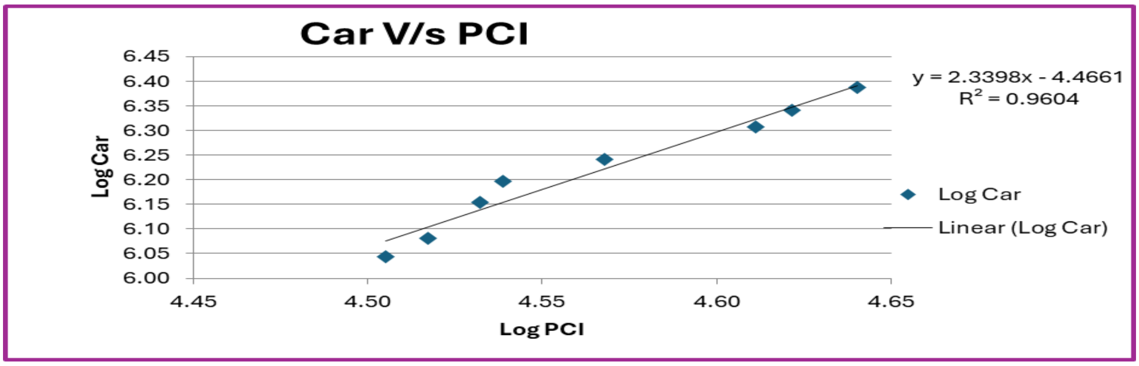

Figure 5-4 : Regression and Elasticity PCI vs. Car – Extrapolation Uttar Pradesh

Table 5-6 : Population Vs Bus Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	199812000	57901	8.30	4.76		
2012	203670000	64147	8.31	4.81	2%	
2013	206322000	74389	8.31	4.87	1%	
2014	209577000	80460	8.32	4.91	2%	
2015	212832000	89127	8.33	4.95	2%	
2016	216870000	112020	8.34	5.05	2%	
2017	219510000	112766	8.34	5.05	1%	
2018	222150000	121975	8.35	5.09	1%	1.5%

Regression analysis of same is given in figure below

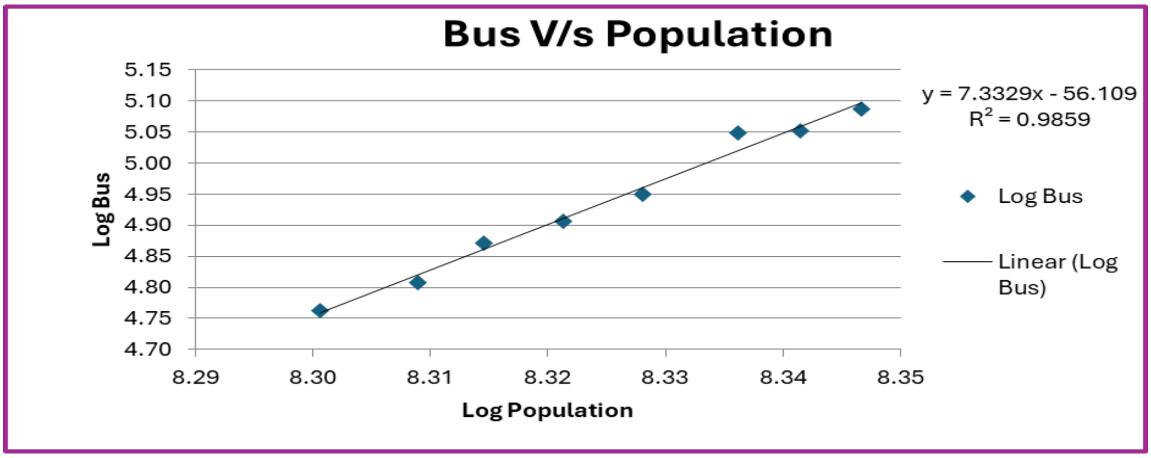

Figure 5-5 : Regression and Elasticity Population vs. Bus – Extrapolation Uttar Pradesh

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-7 : Trucks Traffic Vs NSDP Uttar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	64513155	162813	7.81	5.21		
2012	67355218	186404	7.83	5.27	4%	
2013	70746910	202761	7.85	5.31	5%	
2014	72968630	217609	7.86	5.34	3%	
2015	79204874	245688	7.90	5.39	9%	
2016	88845325	265167	7.95	5.42	12%	

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2017	92380571	307096	7.97	5.49	4%	
2018	97915937	356828	7.99	5.55	6%	6.2%

Following figure depict regression analysis and extrapolation.

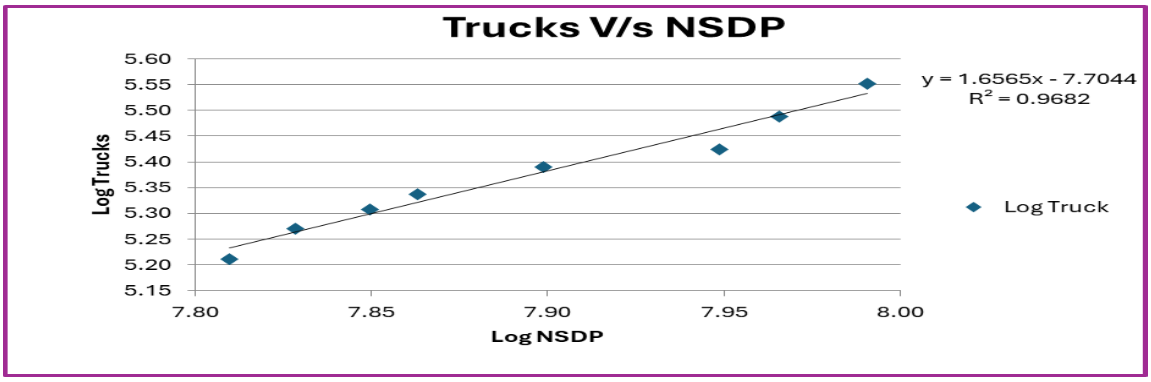

Figure 5-6 : Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Uttar Pradesh.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-8 : Summary Regression Analysis Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
UTTAR PRADESH	**Car/Jeep**	PCI	y = 2.3398x - -4.4661	R² = 0.9604	2.3398	4.58%	10.72%	Good Regression
	Bus	Population	y = 7.3329x - -56.1092	R² = 0.9859	7.3329	1.53%	11.19%	Good Regression
	Truck	NSDP	y = 1.6565x - -7.7044	R² = 0.9682	1.6565	6.18%	10.24%	Good Regression

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-9 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	57192	591069	4.76	5.77		
2012	58441	659542	4.77	5.82	2%	
2013	61053	733916	4.79	5.87	4%	
2014	64496	814079	4.81	5.91	6%	
2015	68565	899307	4.84	5.95	6%	
2016	71324	988391	4.85	5.99	4%	
2017	73109	1095526	4.86	6.04	3%	
2018	75555	1204005	4.88	6.08	3%	4.1%

Regression analysis of same is given in figure below

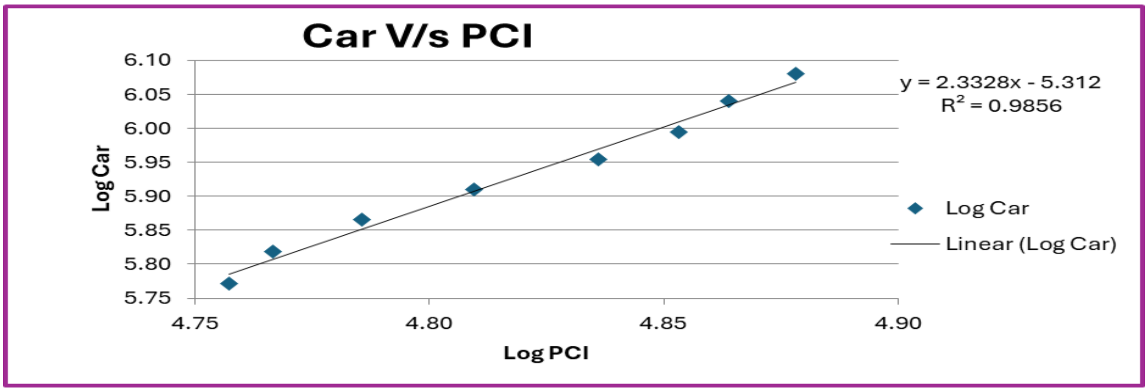

Figure 5-7 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-10 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	68548000	83345	7.84	4.92		
2012	69687000	88616	7.84	4.95	2%	
2013	70825000	93892	7.85	4.97	2%	
2014	71963000	97650	7.86	4.99	2%	
2015	73102000	102818	7.86	5.01	2%	
2016	74240000	108680	7.87	5.04	2%	
2017	75248000	113964	7.88	5.06	1%	
2018	76256000	118301	7.88	5.07	1%	1.5%

Regression analysis of same is given in figure below

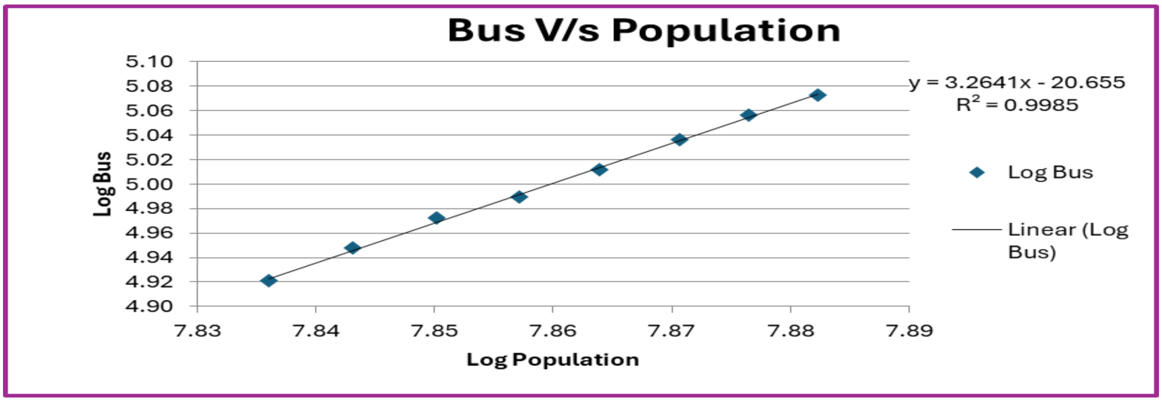

Figure 5-8 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-11 : Trucks Traffic Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	39533093	362028	7.60	5.56		
2012	40980249	401983	7.61	5.60	4%	
2013	43429222	434379	7.64	5.64	6%	
2014	46540773	472365	7.67	5.67	7%	
2015	50192151	517604	7.70	5.71	8%	
2016	52965038	561158	7.72	5.75	6%	
2017	55442912	613055	7.74	5.79	5%	
2018	58059438	665926	7.76	5.82	5%	5.7%

Following figure depict regression analysis and extrapolation.

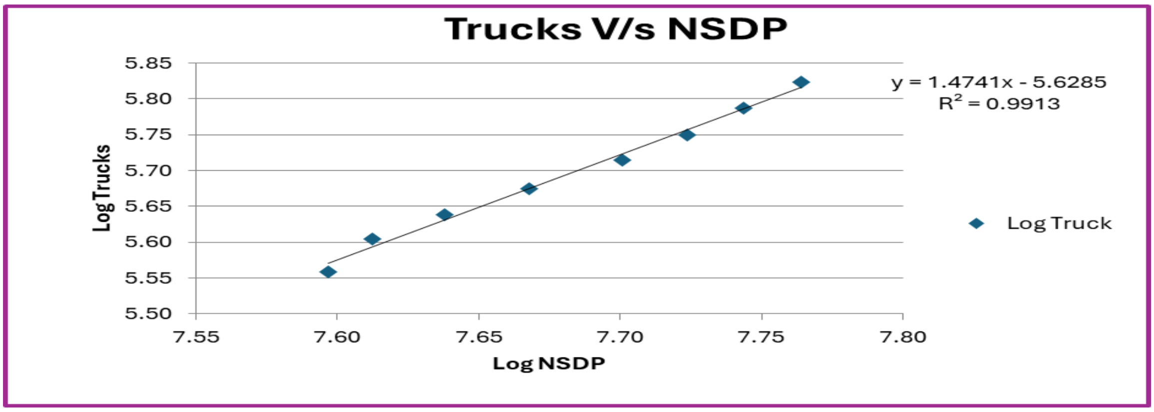

Figure 5-9 : Regression and Elasticity NSDP vs. Trucks – Extrapolation Rajasthan

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-12 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
RAJASTHAN	**Car/Jeep**	PCI	y = 2.3328x - -5.312	R^2 = 0.9856	2.3328	4.07%	9.49%	Good Regression
	Bus	Population	y = 3.2641x - -20.6548	R^2 = 0.9985	3.2641	1.53%	5.01%	Good Regression
	Truck	NSDP	y = 1.4741x - -5.6285	R^2 = 0.9913	1.4741	5.65%	8.33%	Good Regression

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

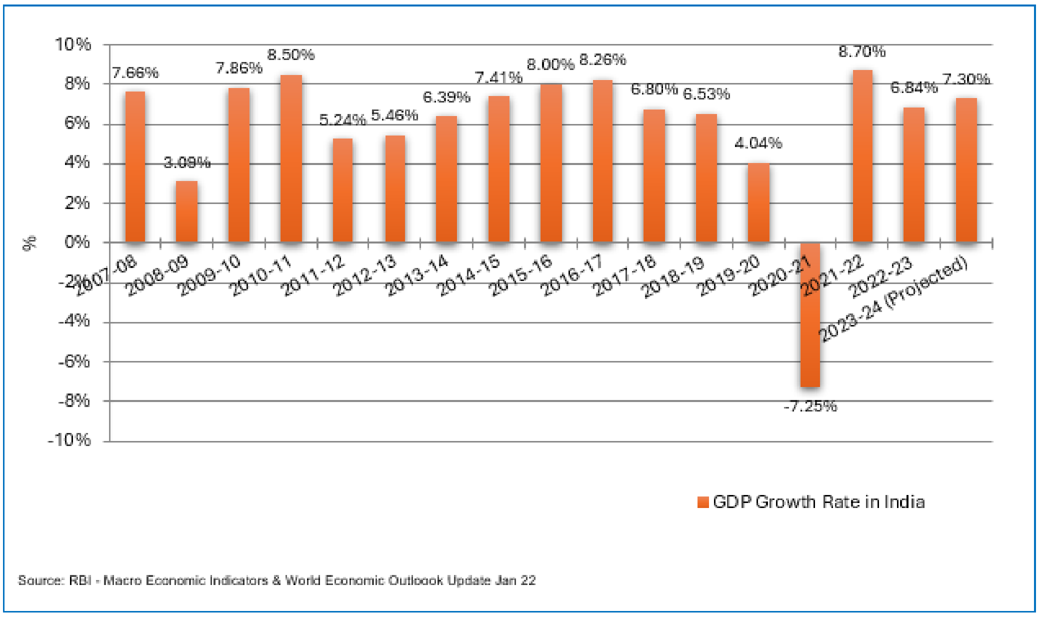

Figure 5-10 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. Leading banking and financial institutions have estimated that India would keep on registering good growth in coming years and the growth in year 2023-24 is expected to be around 7.3%.

5.5 Developments along and around the Project Corridor & State

MADHYA PRADESH: Madhya Pradesh state, which is located in central India is bound on the north by Uttar Pradesh, on the east by Chhattisgarh, on the south by Maharashtra, and on the west by Gujarat and Rajasthan. It is the second largest Indian state and one of the fastest growing states in the country. At current prices, the Gross State Domestic Product (GSDP) of Madhya Pradesh is estimated at Rs.1,151,049 crore trillion (US$ 150.74 billion) in 2022-23, registering an annual growth of 10% over FY21. Between 2015-16 and 2021-22, The GSDP increased at a CAGR (in Rs.) of 13.09% from 2015-16 to 2021-22. Net State Domestic Product (NSDP) of Madhya Pradesh was about Rs. 8.27 trillion (US$ 113.94 billion) in 2020-21. Between 2015-16 and 2020-21, state’s NSDP grew at a CAGR of around 11.22%

UTTAR PRADESH: The state has an area of 240,928 sq kms and is the most populous state in India, with population of 199.8 million as per 2011 census with an average population density of 828 persons per sq. km. The economy of Uttar Pradesh is the third largest of all the states in India. Nominal GDP of the state for the year 2022-23 is Rs. 21.74 trillion.

It is reported that the economy of Uttar Pradesh is growing at a faster rate than the national economy at about 9%. In terms of traffic and transportation as well Uttar Pradesh is one of the leader states in India now.

- Air Connectivity: Major national & international airports connecting the rest of India, Middle East & Southeast Asian countries; Only state to have 05 International Airports (03 existing & 02 upcoming at Jewar (G. Noida & Ayodhya)
- Railway Network: Largest railway network in the country spanning over 8,949 km; 05 Railway Zones
- Inland Waterway: India's 1st Inland Waterway is operational in UP (1100 km Haldia - Varanasi tract
- Expressways: Uttar Pradesh boasts state of art expressways ensuring seamless connectivity; 13 Expressways (existing & upcoming)
- Road Network: Largest Road Network in India; 4 Lakh Km Total Road Length 11,737 Km Total National Highway

Logistics hubs emerging across UP: MMLH Dadri, MMTH Boraki, MMT Varanasi etc.

From the above it can be expected that the project corridor would serve as one of the important transportation links in the area and would contribute to the growth of the region.

5.6 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry Favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth has been suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.25% from Most Likely case for corridor in both states.

5.6.1 Recommended Growth Rates of Traffic for Madhya Pradesh Part of Stretch

Table 5-13 : Recommended Growth Rates Optimistic

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	6.64%	5.57%	5.25%	5.03%	4.41%
LCV	4.92%	4.05%	2.38%	2.01%	2.86%
Minibus	4.18%	3.53%	2.95%	2.68%	2.43%
Bus	4.18%	3.53%	2.95%	2.68%	2.43%
2- Axle	4.92%	4.64%	3.27%	2.75%	2.47%
3 - Axle	4.92%	4.64%	3.27%	2.75%	2.47%
4 to 6 Axle	4.53%	4.34%	3.09%	2.60%	2.34%
7 and Above Axle	4.53%	4.34%	3.09%	2.60%	2.34%

Table 5-14 : Recommended Growth Rates Pessimistic

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	6.14%	5.07%	4.75%	4.53%	3.91%
LCV	4.42%	3.55%	1.88%	1.51%	2.36%
Minibus	3.68%	3.03%	2.45%	2.18%	1.93%
Bus	3.68%	3.03%	2.45%	2.18%	1.93%
2- Axle	4.42%	4.14%	2.77%	2.25%	1.97%
3 - Axle	4.42%	4.14%	2.77%	2.25%	1.97%
4 to 6 Axle	4.03%	3.84%	2.59%	2.10%	1.84%
7 and Above Axle	4.03%	3.84%	2.59%	2.10%	1.84%

Table 5-15 : Recommended Growth Rates Most Likely

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	6.39%	5.32%	5.00%	4.78%	4.16%
LCV	4.67%	3.80%	2.13%	1.76%	2.61%
Minibus	3.93%	3.28%	2.70%	2.43%	2.18%
Bus	3.93%	3.28%	2.70%	2.43%	2.18%
2- Axle	4.67%	4.39%	3.02%	2.50%	2.22%
3 - Axle	4.67%	4.39%	3.02%	2.50%	2.22%
4 to 6 Axle	4.28%	4.09%	2.84%	2.35%	2.09%
7 and Above Axle	4.28%	4.09%	2.84%	2.35%	2.09%

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Chainage 142.319 KM (Optimistic Growth Scenario)

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Tollable Traffic	PCU (Including Exempted)
2023-24	1783	193	7	64	1044	1281	1514	0	**5886**	**16063**
2024-25	1901	202	7	67	1095	1344	1583	0	**6199**	**16856**
2025-26	2027	212	7	70	1149	1410	1655	0	**6530**	**17690**
2026-27	2162	222	7	73	1205	1479	1730	0	**6878**	**18562**
2027-28	2306	233	7	76	1264	1552	1808	0	**7246**	**19478**
2028-29	2459	244	7	79	1326	1628	1890	0	**7633**	**20440**
2029-30	2596	254	7	82	1387	1703	1972	0	**8001**	**21378**
2030-31	2741	264	7	85	1451	1782	2058	0	**8388**	**22363**
2031-32	2894	275	7	88	1518	1865	2147	0	**8794**	**23392**
2032-33	3055	286	7	91	1588	1951	2240	0	**9218**	**24465**
2033-34	3225	298	7	94	1662	2041	2337	0	**9664**	**25590**
2034-35	3394	305	7	97	1716	2108	2409	0	**10036**	**26466**
2035-36	3572	312	7	100	1772	2177	2483	0	**10423**	**27371**
2036-37	3760	319	7	103	1830	2248	2560	0	**10827**	**28312**
2037-38	3957	327	7	106	1890	2321	2639	0	**11247**	**29285**
2038-39	4165	335	7	109	1952	2397	2721	0	**11686**	**30297**
2039-40	4374	342	7	112	2006	2463	2792	0	**12096**	**31205**

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Tollable Traffic	PCU (Including Exempted)
2040-41	4594	349	7	115	2061	2531	2865	0	**12522**	**32142**
2041-42	4825	356	7	118	2118	2601	2940	0	**12965**	**33111**
2042-43	5068	363	7	121	2176	2672	3016	0	**13423**	**34102**
2043-44	5323	370	7	124	2236	2745	3094	0	**13899**	**35127**

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Chainage 226.740 KM (Optimistic Growth Scenario)

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Tollable Traffic	PCU (Including Exempted)
2023-24	1894	420	19	140	1114	1379	1737	0	**6703**	**18268**
2024-25	2020	441	20	146	1169	1447	1816	0	**7059**	**19170**
2025-26	2154	463	21	152	1226	1518	1898	0	**7432**	**20109**
2026-27	2297	486	22	158	1286	1593	1984	0	**7826**	**21098**
2027-28	2450	510	23	165	1349	1671	2074	0	**8242**	**22138**
2028-29	2613	535	24	172	1415	1753	2168	0	**8680**	**23228**
2029-30	2758	557	25	178	1481	1834	2262	0	**9095**	**24289**
2030-31	2912	580	26	184	1550	1919	2360	0	**9531**	**25400**
2031-32	3074	603	27	190	1622	2008	2462	0	**9986**	**26558**
2032-33	3245	627	28	197	1697	2101	2569	0	**10464**	**27773**
2033-34	3426	652	29	204	1776	2198	2681	0	**10966**	**29046**
2034-35	3606	668	30	210	1834	2270	2764	0	**11382**	**30033**
2035-36	3795	684	31	216	1894	2344	2849	0	**11813**	**31050**
2036-37	3994	700	32	222	1956	2421	2937	0	**12262**	**32106**
2037-38	4204	717	33	229	2020	2500	3028	0	**12731**	**33202**
2038-39	4425	734	34	236	2086	2582	3122	0	**13219**	**34338**
2039-40	4647	749	35	242	2143	2653	3203	0	**13672**	**35351**
2040-41	4881	764	36	248	2202	2726	3286	0	**14143**	**36396**
2041-42	5126	779	37	255	2263	2801	3371	0	**14632**	**37477**
2042-43	5384	795	38	262	2325	2878	3459	0	**15141**	**38594**
2043-44	5655	811	39	269	2389	2957	3549	0	**15669**	**39746**

Table 6-3 : Total Tollable Traffic @ Toll Plaza 3- Chainage 295.000 KM (Optimistic Growth Scenario)

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Tollable Traffic	PCU (Including Exempted)
2023-24	1479	490	13	113	1156	1436	1757	0	**6444**	**18255**
2024-25	1577	514	14	118	1213	1507	1837	0	**6780**	**19150**
2025-26	1682	539	15	123	1273	1581	1920	0	**7133**	**20084**
2026-27	1794	565	16	128	1336	1659	2007	0	**7505**	**21066**
2027-28	1913	593	17	133	1402	1741	2098	0	**7897**	**22097**
2028-29	2040	622	18	139	1471	1827	2193	0	**8310**	**23180**
2029-30	2154	647	19	144	1539	1912	2288	0	**8703**	**24234**
2030-31	2274	673	20	149	1610	2001	2387	0	**9114**	**25335**
2031-32	2401	700	21	154	1685	2094	2491	0	**9546**	**26491**
2032-33	2535	728	22	159	1763	2191	2599	0	**9997**	**27695**
2033-34	2676	757	23	165	1845	2293	2712	0	**10471**	**28959**
2034-35	2816	775	24	170	1905	2368	2796	0	**10854**	**29926**
2035-36	2964	793	25	175	1967	2445	2882	0	**11251**	**30921**
2036-37	3120	812	26	180	2031	2525	2971	0	**11665**	**31955**
2037-38	3284	831	27	185	2097	2607	3063	0	**12094**	**33022**
2038-39	3456	851	28	190	2165	2692	3158	0	**12540**	**34127**
2039-40	3630	868	29	195	2224	2766	3240	0	**12952**	**35111**
2040-41	3812	885	30	200	2285	2842	3324	0	**13378**	**36124**
2041-42	4004	903	31	205	2348	2920	3410	0	**13821**	**37169**
2042-43	4205	921	32	210	2413	3000	3499	0	**14280**	**38249**
2043-44	4416	940	33	216	2479	3082	3590	0	**14756**	**39362**

Table 6-4 : Total Tollable Traffic @ Toll Plaza 4- Chainage 357.739 KM (Optimistic Growth Scenario)

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Tollable Traffic	PCU (Including Exempted)
2023-24	1158	452	14	81	1065	1266	1569	0	**5605**	**16154**
2024-25	1235	474	15	84	1117	1328	1640	0	**5893**	**16936**
2025-26	1317	497	16	88	1172	1393	1714	0	**6197**	**17759**
2026-27	1404	521	17	92	1230	1461	1792	0	**6517**	**18624**
2027-28	1497	547	18	96	1290	1533	1873	0	**6854**	**19530**
2028-29	1596	574	19	100	1353	1608	1958	0	**7208**	**20480**
2029-30	1685	597	20	104	1416	1683	2043	0	**7548**	**21413**
2030-31	1779	621	21	108	1482	1761	2132	0	**7904**	**22389**
2031-32	1878	646	22	112	1551	1843	2225	0	**8277**	**23411**
2032-33	1983	672	23	116	1623	1928	2322	0	**8667**	**24476**
2033-34	2093	699	24	120	1698	2017	2423	0	**9074**	**25586**
2034-35	2203	716	25	124	1753	2083	2498	0	**9402**	**26436**
2035-36	2319	733	26	128	1810	2151	2575	0	**9742**	**27312**
2036-37	2441	750	27	132	1869	2221	2655	0	**10095**	**28220**
2037-38	2569	768	28	136	1930	2294	2737	0	**10462**	**29160**

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Tollable Traffic	PCU (Including Exempted)
2038-39	2704	786	29	140	1993	2369	2822	0	**10843**	**30132**
2039-40	2840	802	30	144	2048	2434	2895	0	**11193**	**30994**
2040-41	2983	818	31	148	2104	2501	2970	0	**11555**	**31881**
2041-42	3133	834	32	152	2162	2570	3047	0	**11930**	**32796**
2042-43	3291	851	33	156	2221	2641	3126	0	**12319**	**33738**
2043-44	3456	868	34	160	2282	2714	3207	0	**12721**	**34709**

Table 6-5 : Total Tollable Traffic @ Toll Plaza 1- Chainage 142.319 KM (Pessimistic Growth Scenario)

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Traffic	PCU (Including Exempted)
2023-24	1775	192	7	63	1039	1275	1506	0	**5857**	**15982**
2024-25	1884	200	7	65	1085	1331	1567	0	**6139**	**16689**
2025-26	2000	209	7	67	1133	1390	1630	0	**6436**	**17429**
2026-27	2123	218	7	69	1183	1451	1696	0	**6747**	**18202**
2027-28	2253	228	7	72	1235	1515	1764	0	**7074**	**19010**
2028-29	2391	238	7	75	1290	1582	1835	0	**7418**	**19857**
2029-30	2512	246	7	77	1343	1647	1906	0	**7738**	**20670**
2030-31	2639	255	7	79	1399	1715	1979	0	**8073**	**21517**
2031-32	2773	264	7	81	1457	1786	2055	0	**8423**	**22399**
2032-33	2914	273	7	83	1517	1860	2134	0	**8788**	**23317**
2033-34	3062	283	7	86	1580	1937	2216	0	**9171**	**24278**
2034-35	3207	288	7	88	1624	1991	2273	0	**9478**	**24987**
2035-36	3359	293	7	90	1669	2046	2332	0	**9796**	**25718**
2036-37	3519	299	7	92	1715	2103	2392	0	**10127**	**26472**
2037-38	3686	305	7	94	1762	2161	2454	0	**10469**	**27248**
2038-39	3861	311	7	96	1811	2221	2518	0	**10825**	**28053**
2039-40	4036	316	7	98	1852	2271	2571	0	**11151**	**28753**
2040-41	4219	321	7	100	1894	2322	2625	0	**11488**	**29472**
2041-42	4410	326	7	102	1937	2374	2680	0	**11836**	**30209**
2042-43	4610	331	7	104	1981	2427	2736	0	**12196**	**30965**
2043-44	4819	336	7	106	2026	2482	2793	0	**12569**	**31744**

Table 6-6 : Total Tollable Traffic @ Toll Plaza 2- Chainage 226.740 KM (Pessimistic Growth Scenario)

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Tollable Traffic	PCU (Including Exempted)
2023-24	1885	418	19	139	1109	1372	1729	0	**6671**	**18181**
2024-25	2001	436	20	144	1158	1433	1799	0	**6991**	**18986**
2025-26	2124	455	21	149	1209	1496	1871	0	**7325**	**19820**
2026-27	2254	475	22	154	1262	1562	1946	0	**7675**	**20691**

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Tollable Traffic	PCU (Including Exempted)
2027-28	2392	496	23	160	1318	1631	2024	0	**8044**	**21606**
2028-29	2539	518	24	166	1376	1703	2105	0	**8431**	**22560**
2029-30	2668	536	25	171	1433	1773	2186	0	**8792**	**23478**
2030-31	2803	555	26	176	1492	1846	2270	0	**9168**	**24432**
2031-32	2945	575	27	181	1554	1922	2357	0	**9561**	**25426**
2032-33	3094	595	28	186	1618	2001	2448	0	**9970**	**26460**
2033-34	3251	616	29	192	1685	2084	2542	0	**10399**	**27541**
2034-35	3405	628	30	197	1732	2142	2608	0	**10742**	**28341**
2035-36	3567	640	31	202	1780	2201	2676	0	**11097**	**29165**
2036-37	3736	652	32	207	1829	2262	2745	0	**11463**	**30009**
2037-38	3913	664	33	212	1880	2325	2816	0	**11843**	**30882**
2038-39	4099	676	34	217	1932	2389	2889	0	**12236**	**31779**
2039-40	4285	686	35	222	1975	2443	2950	0	**12596**	**32562**
2040-41	4479	696	36	227	2019	2498	3012	0	**12967**	**33363**
2041-42	4682	707	37	232	2064	2554	3075	0	**13351**	**34186**
2042-43	4894	718	38	237	2110	2611	3140	0	**13748**	**35032**
2043-44	5116	729	39	242	2157	2670	3206	0	**14159**	**35902**

Table 6-7 : Total Tollable Traffic @ Toll Plaza 3- Chainage 295.000 KM (Pessimistic Growth Scenario)

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Tollable Traffic	PCU (Including Exempted)
2023-24	1472	488	12	112	1151	1429	1749	0	**6413**	**18169**
2024-25	1562	510	12	116	1202	1492	1819	0	**6713**	**18961**
2025-26	1658	533	12	120	1255	1558	1892	0	**7028**	**19789**
2026-27	1760	557	12	124	1310	1627	1968	0	**7358**	**20653**
2027-28	1868	582	12	129	1368	1699	2047	0	**7705**	**21559**
2028-29	1983	608	12	134	1428	1774	2129	0	**8068**	**22502**
2029-30	2083	630	12	138	1487	1847	2211	0	**8408**	**23412**
2030-31	2189	652	12	142	1548	1923	2296	0	**8762**	**24356**
2031-32	2300	675	12	146	1612	2003	2384	0	**9132**	**25342**
2032-33	2417	699	12	150	1679	2086	2476	0	**9519**	**26371**
2033-34	2539	724	12	155	1748	2172	2571	0	**9921**	**27438**
2034-35	2660	738	12	159	1796	2232	2638	0	**10235**	**28217**
2035-36	2786	752	12	163	1846	2294	2706	0	**10559**	**29018**
2036-37	2918	766	12	167	1897	2357	2776	0	**10893**	**29840**
2037-38	3057	780	12	171	1949	2422	2848	0	**11239**	**30687**
2038-39	3202	795	12	175	2003	2489	2922	0	**11598**	**31563**
2039-40	3347	807	12	179	2048	2545	2983	0	**11921**	**32315**
2040-41	3499	819	12	183	2094	2602	3046	0	**12255**	**33090**
2041-42	3657	831	12	187	2141	2660	3110	0	**12598**	**33881**
2042-43	3823	844	12	191	2189	2720	3175	0	**12954**	**34695**
2043-44	3996	857	12	195	2238	2781	3242	0	**13321**	**35531**

Table 6-8 : Total Tollable Traffic @ Toll Plaza 4- Chainage 357.739 KM (Pessimistic Growth Scenario)

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Tollable Traffic	PCU (Including Exempted)
2023-24	1153	450	13	81	1060	1260	1561	0	**5578**	**16075**
2024-25	1224	470	13	84	1107	1316	1624	0	**5838**	**16778**
2025-26	1299	491	13	87	1156	1374	1689	0	**6109**	**17507**
2026-27	1379	513	13	90	1207	1435	1757	0	**6394**	**18271**
2027-28	1464	536	13	93	1260	1498	1828	0	**6692**	**19067**
2028-29	1554	560	13	96	1316	1564	1902	0	**7005**	**19901**
2029-30	1633	580	13	99	1370	1629	1975	0	**7299**	**20704**
2030-31	1716	601	13	102	1427	1696	2051	0	**7606**	**21542**
2031-32	1803	622	13	105	1486	1766	2130	0	**7925**	**22412**
2032-33	1894	644	13	108	1547	1839	2212	0	**8257**	**23316**
2033-34	1990	667	13	111	1611	1915	2297	0	**8604**	**24258**
2034-35	2085	680	13	114	1656	1968	2356	0	**8872**	**24941**
2035-36	2184	693	13	117	1702	2022	2417	0	**9148**	**25643**
2036-37	2288	706	13	120	1749	2078	2480	0	**9434**	**26368**
2037-38	2397	719	13	123	1797	2135	2544	0	**9728**	**27108**
2038-39	2511	733	13	126	1847	2194	2610	0	**10034**	**27876**
2039-40	2625	744	13	129	1889	2243	2665	0	**10308**	**28536**
2040-41	2744	755	13	132	1931	2293	2721	0	**10589**	**29209**
2041-42	2868	766	13	135	1974	2345	2778	0	**10879**	**29900**
2042-43	2998	778	13	138	2018	2398	2836	0	**11179**	**30609**
2043-44	3134	790	13	141	2063	2452	2896	0	**11489**	**31339**

Traffic projections for Most Likely scenario is given as under

Table 6-9 : Total Tollable Traffic @ Toll Plaza 1- Chainage 142.319 KM (Most Likely Growth Scenario)

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Traffic	PCU (Including Exempted)
2023-24	1779	193	7	63	1041	1278	1510	0	**5871**	**16020**
2024-25	1893	202	7	65	1090	1338	1575	0	**6170**	**16773**
2025-26	2014	211	7	68	1141	1400	1642	0	**6483**	**17557**
2026-27	2143	221	7	71	1194	1465	1712	0	**6813**	**18379**
2027-28	2280	231	7	74	1250	1533	1785	0	**7160**	**19241**
2028-29	2426	242	7	77	1308	1605	1861	0	**7526**	**20144**
2029-30	2555	251	7	80	1365	1675	1937	0	**7870**	**21019**
2030-31	2691	261	7	83	1425	1748	2016	0	**8231**	**21933**
2031-32	2834	271	7	86	1487	1825	2099	0	**8609**	**22891**

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Traffic	PCU (Including Exempted)
2032-33	2985	281	7	89	1552	1905	2185	0	**9004**	**23888**
2033-34	3144	292	7	92	1620	1989	2274	0	**9418**	**24929**
2034-35	3301	298	7	94	1669	2049	2339	0	**9757**	**25720**
2035-36	3466	304	7	97	1719	2111	2405	0	**10109**	**26536**
2036-37	3639	310	7	100	1771	2175	2473	0	**10475**	**27381**
2037-38	3821	317	7	103	1824	2241	2543	0	**10856**	**28255**
2038-39	4012	324	7	106	1879	2309	2615	0	**11252**	**29158**
2039-40	4204	330	7	109	1926	2367	2676	0	**11619**	**29958**
2040-41	4405	336	7	112	1974	2426	2739	0	**11999**	**30781**
2041-42	4615	342	7	115	2023	2487	2803	0	**12392**	**31627**
2042-43	4835	348	7	118	2074	2549	2869	0	**12800**	**32501**
2043-44	5066	354	7	121	2126	2613	2936	0	**13223**	**33400**

Table 6-10 : Total Tollable Traffic @ Toll Plaza 2- Chainage 226.740 KM (Most Likely Growth Scenario)

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Tollable Traffic	PCU (Including Exempted)
2023-24	1890	419	19	139	1112	1375	1733	0	**6687**	**18224**
2024-25	2011	439	20	144	1164	1439	1807	0	**7024**	**19072**
2025-26	2140	459	21	150	1218	1506	1884	0	**7378**	**19960**
2026-27	2277	480	22	156	1275	1576	1965	0	**7751**	**20894**
2027-28	2423	502	23	162	1334	1650	2049	0	**8143**	**21869**
2028-29	2578	525	24	168	1396	1727	2137	0	**8555**	**22891**
2029-30	2715	545	25	174	1457	1803	2224	0	**8943**	**23880**
2030-31	2859	566	26	180	1521	1882	2315	0	**9349**	**24914**
2031-32	3011	588	27	186	1588	1965	2410	0	**9775**	**25996**
2032-33	3171	610	28	192	1658	2051	2509	0	**10219**	**27122**
2033-34	3340	633	29	198	1731	2141	2612	0	**10684**	**28297**
2034-35	3507	646	30	203	1783	2206	2686	0	**11061**	**29184**
2035-36	3682	660	31	208	1837	2273	2762	0	**11453**	**30102**
2036-37	3866	674	32	214	1892	2342	2840	0	**11860**	**31049**
2037-38	4059	688	33	220	1949	2413	2921	0	**12283**	**32031**
2038-39	4262	703	34	226	2008	2486	3004	0	**12723**	**33046**
2039-40	4466	715	35	231	2058	2548	3075	0	**13128**	**33940**
2040-41	4679	728	36	237	2109	2612	3147	0	**13548**	**34861**
2041-42	4903	741	37	243	2162	2677	3221	0	**13984**	**35811**
2042-43	5137	754	38	249	2216	2744	3297	0	**14435**	**36789**
2043-44	5382	767	39	255	2271	2813	3374	0	**14901**	**37791**

Table 6-11 : Total Tollable Traffic @ Toll Plaza 3- Chainage 295.000 KM (Most Likely Growth Scenario)

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Tollable Traffic	PCU (Including Exempted)
2023-24	1476	489	12	112	1153	1433	1753	0	**6428**	**18210**
2024-25	1570	512	12	116	1207	1500	1828	0	**6745**	**19051**
2025-26	1670	536	12	121	1263	1570	1906	0	**7078**	**19931**
2026-27	1777	561	12	126	1322	1643	1988	0	**7429**	**20856**
2027-28	1891	587	12	131	1384	1720	2073	0	**7798**	**21823**
2028-29	2012	614	12	136	1449	1800	2162	0	**8185**	**22835**
2029-30	2119	637	12	140	1513	1879	2250	0	**8550**	**23814**
2030-31	2232	661	12	145	1579	1961	2342	0	**8932**	**24836**
2031-32	2351	686	12	150	1648	2047	2438	0	**9332**	**25904**
2032-33	2476	712	12	155	1720	2137	2538	0	**9750**	**27019**
2033-34	2608	739	12	160	1795	2231	2642	0	**10187**	**28182**
2034-35	2738	755	12	164	1849	2298	2717	0	**10533**	**29048**
2035-36	2875	771	12	168	1905	2367	2794	0	**10892**	**29943**
2036-37	3019	787	12	173	1962	2438	2873	0	**11264**	**30865**
2037-38	3170	804	12	178	2021	2512	2955	0	**11652**	**31825**
2038-39	3328	821	12	183	2082	2588	3039	0	**12053**	**32812**
2039-40	3487	835	12	187	2134	2653	3110	0	**12418**	**33675**
2040-41	3654	850	12	192	2187	2719	3183	0	**12797**	**34565**
2041-42	3829	865	12	197	2242	2787	3258	0	**13190**	**35484**
2042-43	4012	880	12	202	2298	2857	3335	0	**13596**	**36429**
2043-44	4204	896	12	207	2355	2928	3413	0	**14015**	**37395**

Table 6-12 : Total Tollable Traffic @ Toll Plaza 4- Chainage 357.739 KM (Most Likely Growth Scenario)

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Tollable Traffic	PCU (Including Exempted)
2023-24	1155	451	14	81	1062	1263	1565	0	**5591**	**16113**
2024-25	1229	472	15	84	1112	1322	1632	0	**5866**	**16858**
2025-26	1308	494	16	87	1164	1384	1702	0	**6155**	**17637**
2026-27	1392	517	17	90	1218	1449	1775	0	**6458**	**18452**
2027-28	1481	541	18	94	1275	1517	1851	0	**6777**	**19307**
2028-29	1576	566	19	98	1334	1588	1930	0	**7111**	**20199**
2029-30	1660	588	20	101	1392	1658	2009	0	**7428**	**21066**
2030-31	1748	610	21	104	1453	1731	2091	0	**7758**	**21968**
2031-32	1841	633	22	107	1517	1807	2177	0	**8104**	**22913**
2032-33	1939	657	23	111	1584	1886	2266	0	**8466**	**23899**
2033-34	2042	682	24	115	1653	1969	2359	0	**8844**	**24928**
2034-35	2144	697	25	118	1703	2028	2426	0	**9141**	**25691**
2035-36	2251	712	26	121	1754	2089	2495	0	**9448**	**26478**
2036-37	2364	727	27	124	1807	2152	2566	0	**9767**	**27291**

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle	Total Tollable Traffic	PCU (Including Exempted)
2037-38	2482	742	28	127	1861	2217	2639	0	**10096**	**28128**
2038-39	2606	758	29	130	1917	2284	2714	0	**10438**	**28993**
2039-40	2730	771	30	133	1965	2341	2778	0	**10748**	**29750**
2040-41	2860	785	31	136	2014	2399	2843	0	**11068**	**30525**
2041-42	2997	799	32	139	2064	2459	2910	0	**11400**	**31325**
2042-43	3140	813	33	142	2116	2520	2978	0	**11742**	**32144**
2043-44	3290	827	34	145	2169	2583	3048	0	**12096**	**32989**

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued at fee at 2/3rd rate for 50 single journey trips.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
   a) Local Car Jeep Van - Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza)

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A} - \text{WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2022-23. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

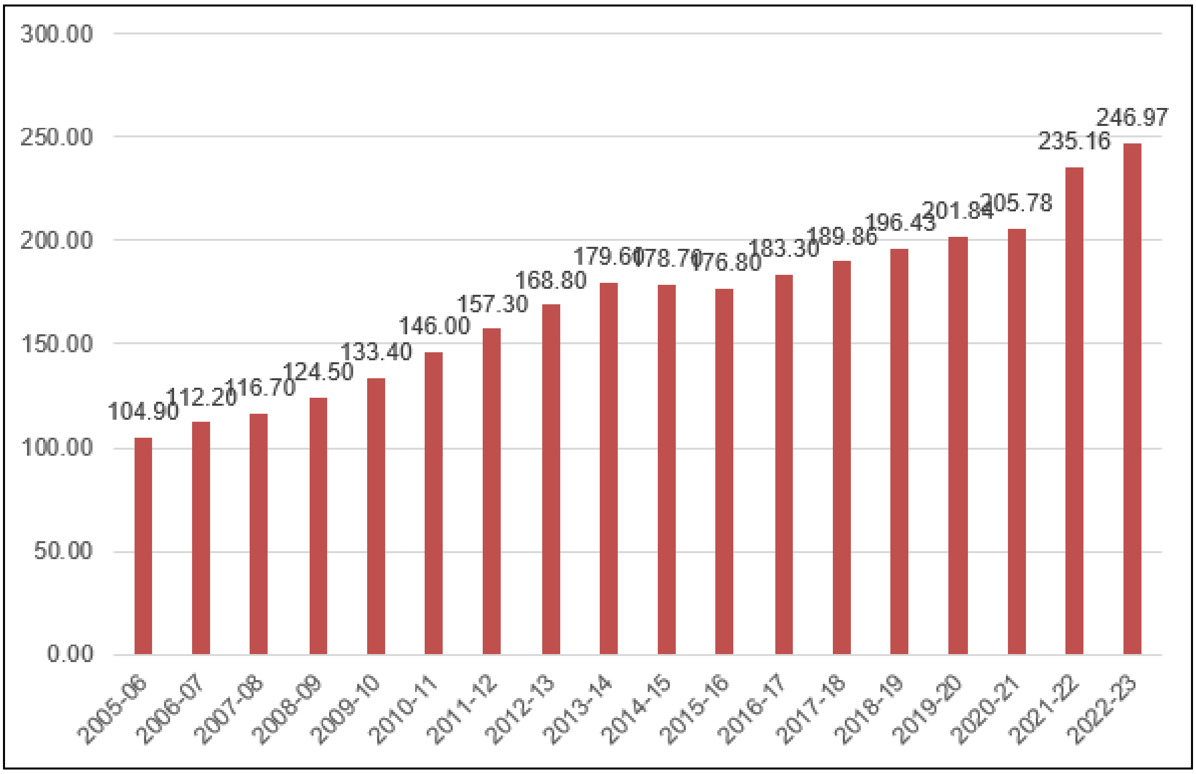

Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Oversized Vehicles (7 or more Axles)	4.20

These rates are then modified for as per procedure provided in guidelines of notification considering factors listed below.

- Annual revision of fee rate - @3%
- Application of WPI

Base rates have been worked out to map the current rates. These shall be updated when more details come in. Base toll rates are given below.

Table 7-2 : Toll Rates for Year 2022-23 (Rs. Rupees) @ Km 142.319

Sr.no	Type of Vehicle	Rates
1	Car / Jeep / Van	115.00
2	LCV	185.00
3	Minibus	185.00
4	Bus	385.00
5	Truck - 2 Axle	385.00
6	3 - Axle	420.00
7	4 - 6 Axle	605.00
8	7 & above Axle	735.00

Above rates are applicable for base year 2022-23. These rates have been escalated for future. year as NHAI policy and MORTH guideline for future revenue working.

Table 7-3 : Toll Rates for Forecasting Year (Rs. Rupees) @ Km 142.319

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle
2023-24	120	195	195	405	405	440	635	775
2024-25	125	200	200	415	415	455	650	795
2025-26	130	210	210	435	435	475	685	835
2026-27	135	220	220	460	460	500	720	875
2027-28	140	230	230	480	480	525	755	920
2028-29	150	240	240	505	505	550	795	965
2029-30	155	255	255	530	530	580	835	1015
2030-31	165	265	265	560	560	610	875	1070
2031-32	175	280	280	590	590	640	925	1125

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle
2032-33	185	295	295	620	620	675	970	1180
2033-34	190	310	310	650	650	710	1020	1245
2034-35	200	325	325	685	685	745	1075	1310
2035-36	215	345	345	720	720	785	1130	1375
2036-37	225	360	360	760	760	830	1190	1450
2037-38	235	380	380	800	800	870	1255	1525
2038-39	250	400	400	840	840	920	1320	1605
2039-40	260	425	425	885	885	970	1390	1695
2040-41	275	445	445	935	935	1020	1465	1785
2041-42	290	470	470	985	985	1075	1545	1880
2042-43	305	495	495	1040	1040	1135	1630	1980
2043-44	325	520	520	1095	1095	1195	1715	2090

Table 7-4 : Toll Rates for Year 2022-23 (Rs. Rupees) @ Km 226.740

Sr.no	Type of Vehicle	Rates
1	Car / Jeep / Van	145.00
2	LCV	230.00
3	Minibus	230.00
4	Bus	480.00
5	Truck - 2 Axle	480.00
6	3 - Axle	525.00
7	4 - 6 Axle	755.00
8	7 & above Axle	920.00

Above rates are applicable for base year 2022-23. These rates have been escalated for future. year as NHAI policy and MORTH guideline for future revenue working.

Table 7-5 : Toll Rates for Forecasting Year (Rs. Rupees) @ Km 226.740

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle
2023-24	150	240	240	505	505	555	795	965
2024-25	155	250	250	520	520	565	815	990
2025-26	170	270	270	570	570	620	890	1085
2026-27	175	285	285	600	600	650	935	1140
2027-28	185	300	300	630	630	685	985	1200
2028-29	195	315	315	660	660	720	1035	1260

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle
2029-30	205	330	330	695	695	755	1090	1325
2030-31	215	350	350	730	730	795	1145	1395
2031-32	225	365	365	765	765	835	1205	1465
2032-33	240	385	385	805	805	880	1265	1540
2033-34	250	405	405	850	850	925	1330	1620
2034-35	265	425	425	895	895	975	1400	1705
2035-36	280	450	450	940	940	1025	1475	1795
2036-37	295	475	475	990	990	1080	1555	1890
2037-38	310	500	500	1045	1045	1135	1635	1990
2038-39	325	525	525	1100	1100	1200	1720	2095
2039-40	340	550	550	1155	1155	1260	1815	2210
2040-41	360	580	580	1220	1220	1330	1910	2325
2041-42	380	615	615	1285	1285	1400	2015	2450
2042-43	400	645	645	1355	1355	1475	2125	2585
2043-44	420	680	680	1430	1430	1555	2240	2725

Table 7-6 : Toll Rates for Year 2022-23 (Rs. Rupees) @ Km 295.000

Sr.no	Type of Vehicle	Rates
1	Car / Jeep / Van	110.00
2	LCV	180.00
3	Minibus	180.00
4	Bus	380.00
5	Truck - 2 Axle	380.00
6	3 - Axle	415.00
7	4 - 6 Axle	595.00
8	7 & above Axle	725.00

Above rates are applicable for base year 2022-23. These rates have been escalated for future. year as NHAI policy and MORTH guideline for future revenue working.

Table 7-7 : Toll Rates for Forecasting Year (Rs. Rupees) @ Km 295.000

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle
2023-24	120	190	190	400	400	435	625	760
2024-25	120	195	195	410	410	445	640	780
2025-26	125	205	205	430	430	470	675	820

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle
2026-27	135	215	215	450	450	495	710	860
2027-28	140	225	225	475	475	520	745	905
2028-29	145	240	240	500	500	545	780	950
2029-30	155	250	250	525	525	570	820	1000
2030-31	165	265	265	550	550	600	865	1050
2031-32	170	275	275	580	580	630	910	1105
2032-33	180	290	290	610	610	665	955	1165
2033-34	190	305	305	640	640	700	1005	1225
2034-35	200	320	320	675	675	735	1060	1290
2035-36	210	340	340	710	710	775	1115	1355
2036-37	220	355	355	750	750	815	1175	1430
2037-38	235	375	375	790	790	860	1235	1505
2038-39	245	395	395	830	830	905	1300	1585
2039-40	260	415	415	875	875	955	1370	1670
2040-41	270	440	440	920	920	1005	1445	1760
2041-42	285	465	465	970	970	1060	1520	1855
2042-43	300	490	490	1025	1025	1115	1605	1955
2043-44	320	515	515	1080	1080	1175	1690	2060

Table 7-8 : Toll Rates for Year 2022-23 (Rs. Rupees) @ Km 357.739

Sr.no	Type of Vehicle	Rates
1	Car / Jeep / Van	145.00
2	LCV	235.00
3	Minibus	235.00
4	Bus	495.00
5	Truck - 2 Axle	495.00
6	3 - Axle	540.00
7	4 - 6 Axle	775.00
8	7 & above Axle	940.00

Above rates are applicable for base year 2022-23. These rates have been escalated for future. year as NHAI policy and MORTH guideline for future revenue working.

Table 7-9 : Toll Rates for Forecasting Year (Rs. Rupees) @ Km 357.739

Year	Car / Jeep / Van	LCV	Minibus	Bus	Truck - 2 Axle	3 - Axle	4 - 6 Axle	7 & above Axle
2023-24	155	245	245	520	520	565	815	990
2024-25	155	255	255	530	530	580	835	1015
2025-26	165	265	265	560	560	610	875	1065
2026-27	175	280	280	585	585	640	920	1120
2027-28	180	295	295	615	615	670	965	1175
2028-29	190	310	310	650	650	705	1015	1235
2029-30	200	325	325	680	680	745	1070	1300
2030-31	210	340	340	715	715	780	1120	1365
2031-32	220	360	360	755	755	820	1180	1435
2032-33	235	380	380	790	790	865	1240	1510
2033-34	245	400	400	835	835	910	1305	1590
2034-35	260	420	420	875	875	955	1375	1675
2035-36	275	440	440	925	925	1005	1445	1760
2036-37	285	465	465	970	970	1060	1525	1855
2037-38	300	490	490	1025	1025	1115	1605	1955
2038-39	320	515	515	1075	1075	1175	1690	2055
2039-40	335	540	540	1135	1135	1240	1780	2165
2040-41	355	570	570	1195	1195	1305	1875	2285
2041-42	370	600	600	1260	1260	1375	1975	2405
2042-43	395	635	635	1330	1330	1450	2085	2535
2043-44	415	670	670	1400	1400	1530	2195	2675

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2043-44 years starting from the year 2022-23 are shown in tables below.

Table 7-10 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Location / Year	TP-1 - Malthone (142+319)	TP-2 - Chitora (226+740)	TP-3 - Titarpani (295+000)	TP-4 - Bakori (357+739)	Total
2023-24	79.97	110.71	88.91	102.21	381.80
2024-25	85.96	118.62	95.05	109.29	408.93

Location / Year	TP-1 - Malthone (142+319)	TP-2 - Chitora (226+740)	TP-3 - Titarpani (295+000)	TP-4 - Bakori (357+739)	Total
2025-26	94.54	136.05	104.91	120.44	455.95
2026-27	104.28	149.61	115.79	132.57	502.25
2027-28	114.81	165.60	127.81	146.01	554.21
2028-29	126.37	181.81	140.06	160.74	608.97
2029-30	138.74	199.82	153.84	176.88	669.29
2030-31	152.59	219.54	169.43	193.75	735.31
2031-32	168.72	241.70	186.50	213.90	810.83
2032-33	184.97	265.19	204.59	234.58	889.32
2033-34	202.90	291.50	225.01	258.12	977.53
2034-35	220.64	317.21	244.84	280.41	1063.10
2035-36	240.94	345.82	266.98	305.80	1159.54
2036-37	261.70	375.34	289.67	331.61	1258.32
2037-38	284.38	407.95	315.37	360.75	1368.44
2038-39	309.74	443.85	342.57	392.44	1488.60
2039-40	336.30	481.42	372.60	426.37	1616.69
2040-41	363.63	520.55	402.11	460.57	1746.87
2041-42	394.31	564.32	435.67	498.59	1892.90
2042-43	427.97	611.70	472.63	541.45	2053.74
2043-44	465.19	664.89	513.96	587.95	2231.99

Table 7-11 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Location / Year	TP-1 - Malthone (142+319)	TP-2 - Chitora (226+740)	TP-3 - Titarpani (295+000)	TP-4 - Bakori (357+739)	Total
2023-24	79.58	110.18	88.47	101.72	379.94
2024-25	85.12	117.48	94.11	108.22	404.93
2025-26	93.17	134.08	103.38	118.69	449.31
2026-27	102.26	146.78	113.56	129.99	492.59
2027-28	112.07	161.68	124.74	142.49	540.98
2028-29	122.78	176.71	136.03	156.09	591.61
2029-30	134.16	193.30	148.68	170.97	647.11
2030-31	146.82	211.37	162.94	186.38	707.51
2031-32	161.54	231.53	178.52	204.76	776.36
2032-33	176.29	252.84	194.89	223.47	847.48
2033-34	192.44	276.60	213.27	244.71	927.02
2034-35	208.25	299.48	230.93	264.53	1003.19
2035-36	226.31	324.91	250.56	287.10	1088.88
2036-37	244.60	350.97	270.53	309.74	1175.85
2037-38	264.53	379.58	293.15	335.35	1272.61
2038-39	286.69	410.95	316.90	363.04	1377.59
2039-40	309.72	443.59	343.00	392.52	1488.84
2040-41	333.26	477.38	368.37	421.94	1600.94
2041-42	359.67	515.02	397.19	454.60	1726.47
2042-43	388.54	555.52	428.73	491.33	1864.11
2043-44	420.33	600.91	463.93	530.95	2016.12

Table 7-12 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Location / Year	TP-1 - Malthone (142+319)	TP-2 - Chitora (226+740)	TP-3 - Titarpani (295+000)	TP-4 - Bakori (357+739)	Total
2023-24	79.76	110.44	88.69	101.98	380.86
2024-25	85.52	118.07	94.57	108.79	406.94
2025-26	93.85	135.10	104.15	119.60	452.69
2026-27	103.27	148.24	114.67	131.32	497.50
2027-28	113.41	163.66	126.27	144.28	547.63
2028-29	124.53	179.29	138.02	158.45	600.29
2029-30	136.41	196.65	151.23	173.96	658.25
2030-31	149.63	215.55	166.13	190.08	721.39
2031-32	165.06	236.73	182.45	209.34	793.58
2032-33	180.54	259.06	199.64	229.00	868.24
2033-34	197.58	284.07	218.99	251.40	952.05
2034-35	214.32	308.33	237.67	272.43	1032.75
2035-36	233.48	335.32	258.51	296.40	1123.71
2036-37	252.98	363.12	279.79	320.57	1216.46
2037-38	274.26	393.71	303.93	347.90	1319.80
2038-39	297.97	427.29	329.33	377.51	1432.10
2039-40	322.71	462.33	357.32	409.08	1551.44
2040-41	348.16	498.72	384.72	440.79	1672.39
2041-42	376.68	539.33	415.87	476.05	1807.92
2042-43	407.91	583.14	449.98	515.75	1956.78
2043-44	442.33	632.26	488.13	558.73	2121.45

7.6 Modification in Concession Period

Modification of the concession period shall be done on the basis of Revenue targets given in the contract for milestones 1 & 2.

Modification in concession period as per provisions of DCA and same is summarized in table for all scenarios.

Pessimistic Case

Target Point 1- March 2033									
Target Month - March 2029	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period**	**Change in Concession period**	**Modified Concession Period**
TOT-12	70	67.81	-3.13%	No	-	0.00%	20.00	0.00	

Target Point 2- March 2038											
Target Month - March 2036	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period**	**Change in Concession period**	**Total Change in Concession period**	**Calculated Modified Concession Period**	**Final Concession Period subject to Cap**
TOT-12	123	110.63	-10.06%	No	-	0.00%	20.00	0.00	0.00	20.00	

Most likely Case

Target Point 1- March 2033									
Target Month - March 2029	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period**	**Change in Concession period**	**Modified Concession Period**
TOT-12	70	69.40	-0.85%	No	-	0.00%	20.00	0.00	

Target Point 2- March 2038											
Target Month - March 2036	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period	Change in Concession period	Total Change in Concession period	Calculated Modified Concession Period	Final Concession Period subject to Cap
TOT-12	123	114.88	-6.60%	No	-	0.00%	20.00	0.00	0.00	20.00	

Optimistic Case

Target Point 1- March 2033									
Target Month - March 2029	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period	Change in Concession period	Modified Concession Period
TOT-12	70	71.02	1.45%	No	-	0.00%	20.00	0.00	

Target Point 2- March 2038											
Target Month - March 2036	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period	Change in Concession period	Total Change in Concession period	Calculated Modified Concession Period	Final Concession Period subject to Cap
TOT-12	123	119.29	-3.01%	No	-	0.00%	20.00	0.00	0.00	20.00	

TOT-12 (Lalitpur to Lakhadon)-Modification in Concession Period						
Types of Scenarios	**Pessimistic Case**		**Most likely Case**		**Optimistic Case**	
Target Month	**Mar-31**	**Mar-38**	**Mar-31**	**Mar-38**	**Mar-31**	**Mar-38**
Target Revenue (Rs. Crores)	70	123.00	70	123	70.00	123.00
Calculated Revenue (Rs. Crores)	67.81	110.63	69.40	114.88	71.02	119.29
Differences %	-3.13%	-10.06%	-0.85%	-6.60%	1.45%	-3.01%
If qualifies for Modification in Concession Period	No	No	No	No	No	No
Qualifying Increment or shortfall	-	-	-	-	-	-
Change in Concession period %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Original Concession Period	20.00	20.00	20.00	20.00	20.00	20.00
Change in Concession period	0.00	0.00	0.00	0.00	0.00	0.00
Total Change in Concession period	0.00		0.00		0.00	
Calculated Modified Concession Period	20.00		20.00		20.00	
Final Concession Period subject to Cap	0.00		0.00		0.00	

Thus, there is no modification expected in concession period due to variation in revenue as per above estimates in all scenarios.

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Lalitpur-Sagar- Lakhnadon from Km 99.00 to Km 415.089 section of NH-44 in state of Madhya Pradesh and Uttar Pradesh is currently four lane road. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the important regional network connecting Uttar Pradesh, Madhya Pradesh to Southern States and vice-versa. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As discussed, dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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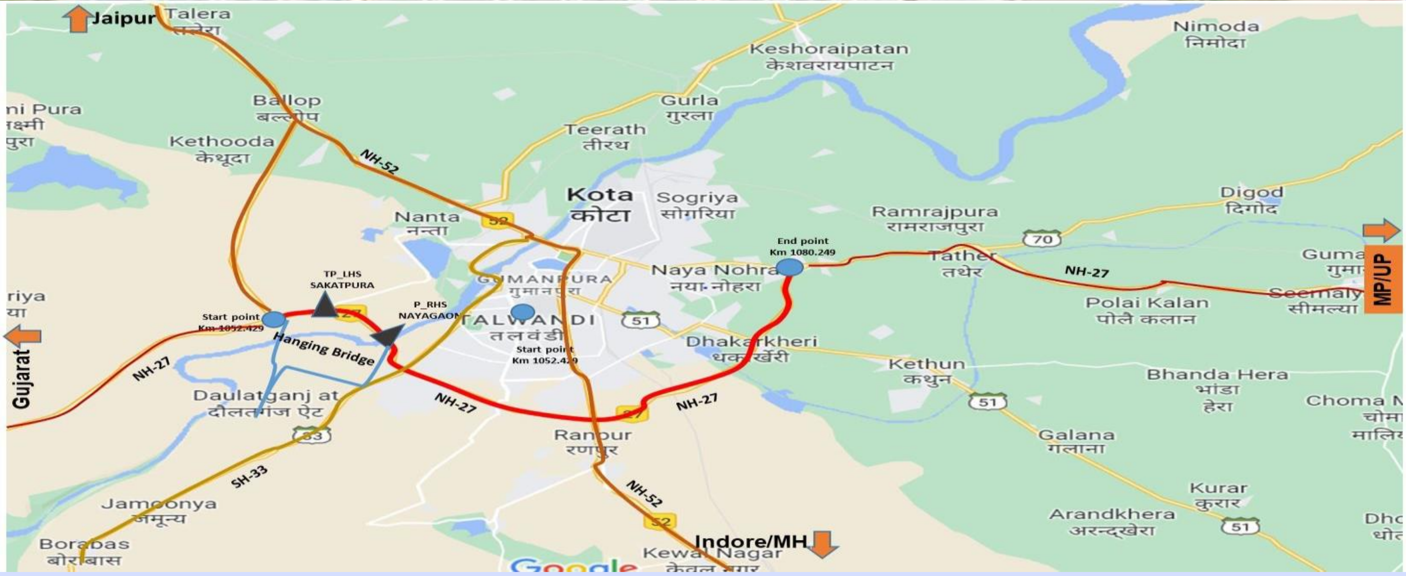
KOTA BYPASS SECTION OF NH-27 IN THE STATE OF RAJASTHAN UNDER
(TOT Bundle-13)



TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

MARCH 2024

GMD CONSULTANTS ★ NAVI MUMBAI ★

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KOTA BYPASS SECTION OF NH-27 IN THE STATE OF RAJASTHAN UNDER (TOT Bundle-13)

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

MARCH 2024

GMD CONSULTANTS
NAVI MUMBAI

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ABBREVIATIONS

AADT	Annual Average Daily Traffic	**NHAI**	National Highway Authority of India
BOT	Build Operate Transfer	**NHDP**	National Highways Development Project
CAGR	Compound Annual Growth Rate	**NSDP**	Net State Domestic Product
CTV	Classified traffic volume	**O&M**	Operation & Maintenance
DBFOT	Design, Build, Finance, Operate & Transfer	**PCDP**	Per Capita Domestic Product
EME	Earth Moving Equipment	**PCI**	Per Capita Income
GDP	Gross Domestic Product	**PCU**	Passenger Car Unit
GSDP	Gross State Domestic Product	**PSC**	Pre-stressed Concrete
HCM	Heavy Construction Machinery	**RCC**	Reinforced cement concrete
HCV	Heavy Commercial Vehicle	**RHS**	Right Hand Side
HTMS	Highway Traffic Management System	**SH**	State Highway
IRC	Indian Road Congress	**TP**	Toll Plaza
IRR	Internal Rate of Return	**WPI**	Wholesale Price Index
LCV	Light Commercial Vehicle	**SIR**	Special Investment Region
LHS	Left Hand Side	**c.**	Circa
LGV	Light Goods Vehicle	**ROB**	Railway Over Bridge
MAV	Multi Axle Vehicle	**MDR**	Major District Road
MORTH	Ministry of Road Transport and Highways	**ODR**	Other District Road
NH	National Highway	**CA**	Concession Agreement
PCC	Plain Cement Concrete	**RMT**	Running Meter
CR	Coarse Rubble		

CHAPTER 1

INTRODUCTION

1.1 Background

The National Highways Authority of India (NHAI) introduced the Toll, Operate and Transfer (TOT) model for partnership with private developers in the road sector. Under this model, NHAI passes on the toll collection rights and operation and maintenance obligations for 20 years to the private developer against payment of upfront, one-time, lump sum concession fees quoted by the private developer as part of the comprehensive bidding process. Projects under this model are awarded as a bundle of operational national highways, which allows the investor to offset the risks of one project against another. Since existing and operational roads are auctioned under the TOT model.

Under the Toll Operate and Transfer (ToT) 13 bundle, NHAI had invited tenders for selection of concessionaire for maintenance of the National Highway stretch Kota Bypass section NH-27 in the state of Rajasthan.

M/s. IRB Infrastructure Developers Limited., has been declared as the selected bidder for the project. This report is for Part Section ToT bundle 13 “Kota Bypass section NH-27 spanning in the state of Rajasthan. Project Highway alignment is depicted in the following figure.

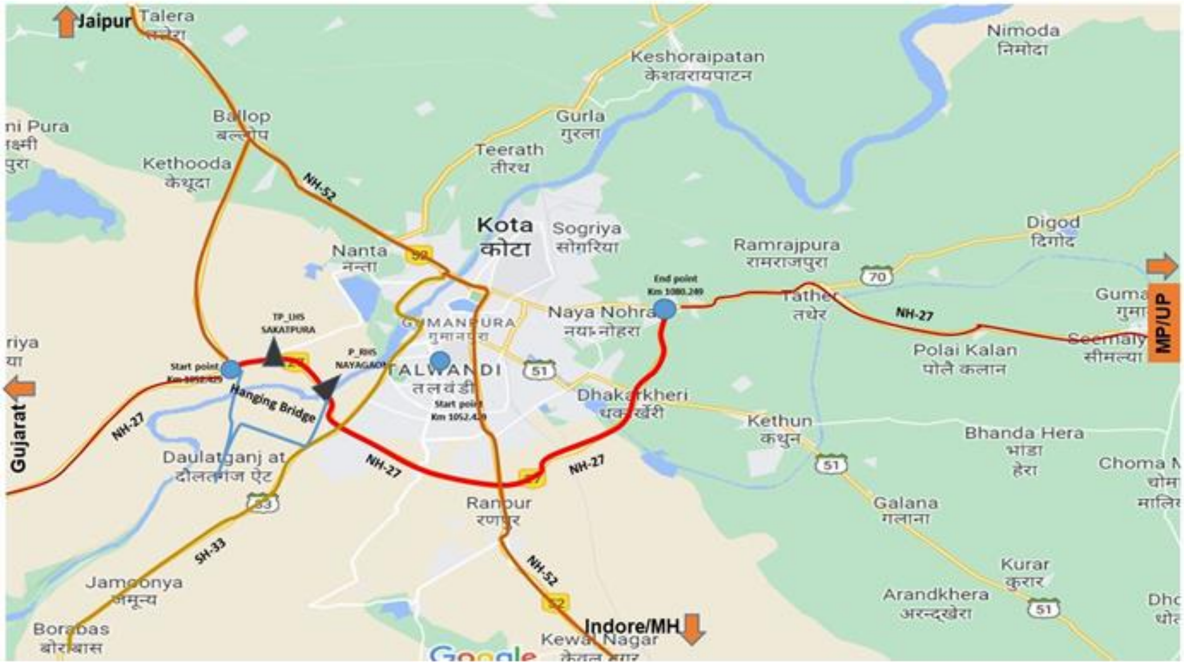


Figure 1-1: Project Stretch of ToT Bundle 13 (Part)

1.2 Objective of the Study

M/s IRB Infrastructure Developers Limited (IRB) intends to develop a traffic study report for Four Laning of Kota Bypass section NH-27 on BOT basis. GMD Consultants have been assigned the work of conducting traffic study and developing revenue model based on traffic projections and forecast.

For making the proper assessment of traffic volume on project stretch, base year traffic and its projection, GMD Consultants have been provided with the basic survey and investigation report available with client. The base year traffic data is the primary input for determination of future traffic demand. With a view to estimate the base year traffic volume in different categories of goods and passenger carrying vehicles, the Classified Traffic Volume Count (CTVC) surveys, Turning Movement surveys (TMC), Registration Plate Survey (N.P.) & Origin-Destination (O-D) were conducted at Main Toll Plaza (MTP) and data of same is provided for study.

The year 2023-24 has been taken as the base year for projections and forecasting of traffic in the horizon year. This report fulfils part of the requirement of the assignment.

1.3 Scope of Services

Following may be referred to as broad scope of Traffic Study of Four Laning of Kota Bypass section NH-27

Classified Traffic Volume Count at main toll plaza location at Toll Plaza locations. This data was supplied by the Concessionaire.

- Establishment of traffic pattern
- Working our traffic demand elasticity and growth
- Traffic forecast up to concession period.
- Preparation of revenue model up to concession period
- Any other analysis relevant to scope

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

The project stretch is a section of NH-44, which is the longest National Highway in the country, running through North, Central and South India. The Kota Bypass section is located along the Project Stretch starting from Km 1052+429 of NH-27 and ends at Km 1080+249 of NH-27 including a Cable-Stayed Bridge on the Chambal River in the State of Rajasthan.

Project Stretch Description

The project stretch under this study starts from Km 1052+429 of NH-27 and ends at Km 1080+249 of NH-27 at Jhansi in the state of Rajasthan. The length of project stretch is 27.820 km and has 4-lane configuration with single staggered of Toll Plaza (Sakatpura (LHS) at ch.1055+217 KM and Nayagaon (RHS) at ch.1058+837 KM).

The following figure shows this the alignment of project highway in above context.

Figure 2-1 : Project Alignment with Toll Plaza

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Kota Bypass section of NH-27- Provided by Concessionaire for base year 2023-24
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 1055+217 Toll Plaza at Sakatpura (LHS Carriageway), Km 1058+837 Toll Plaza at Nayagaon (RHS Carriageway)	AADT from previous traffic study report for Year 2023-24	AADT from previous traffic study report for Year 2023-24	AADT from previous traffic study report for Year 2023-24	AADT from previous traffic study report for Year 2023-24	AADT from previous traffic study report for Year 2023-24

Toll plaza is located in Rajasthan.

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations-based traffic survey done at project stretch.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below .

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck

Vehicle Type	
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Minibus /LCV
- Bus
- Truck /
- 3 Axle commercial vehicle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data as per traffic survey conducted at toll plaza locations. It may not represent the whole year traffic as this pertains to specific period only. Hence a seasonality factor has been applied to average traffic of current period to arrive at Annual Average Daily Traffic of base year 2023-24. Same corrected traffic is used for future projections and revenue calculations. Following table shows Annual Average Daily Traffic (AADT) for year 2023-24 as considered.

Table 3-3 : Traffic Data at Toll Plaza Sakatpura (Km 1055+217) / Nayagaon (Km 1058+837)

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.) - 2023-24
1	Car / Taxi / Jeep / Van	3399.00
2	Mini LCV	334.00

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.) - 2023-24
3	Bus	54.00
4	Minibus	14.00
5	LCV	513.00
6	Truck - 2 Axle	538.00
7	3 - Axle	745.00
8	4 - 6 Axle	2493.00
9	7 & above Axle	0.00
	Total	**8090**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in “IRC-64-1990: Guidelines for Capacity of Roads in Rural areas”. The adopted passenger car unit values (PCU) are presented in Table 3-4.

Table 3-4 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5

Vehicle Type	PCUs
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-5 : Traffic in PCU at Project Stretch

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2023-2024	Km 1055+217 Toll Plaza at Sakatpura Km 1058+837 Toll Plaza at Nayagaon	8090	19753	2.44

It can be observed from above that project traffic has PCU index 2 to 2.6 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at four toll plaza locations.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

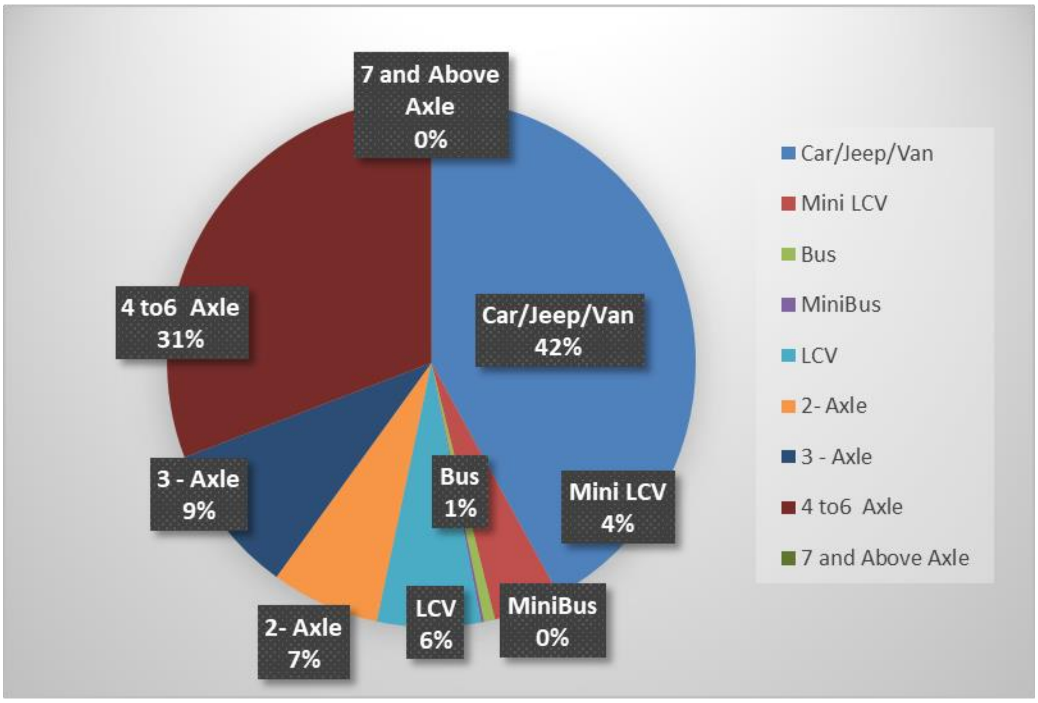


Figure 3-2: Model split of tollable vehicle @ Km 1055+217/ Km 1058+837

It is observed that car traffic forms about 42% of total traffic at toll plaza location KM 134.000 while multi axle commercial vehicles are about 40% of total traffic. Truck / Bus and LCV share about 12% and 6% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

Since actual traffic data for bifurcation of journey is not available with Concessionaire, as the project has very recently been awarded, journey type bifurcation is adopted from traffic survey data provided by Concessionaire. For the purpose of calculating revenue all return journeys and monthly passes are converted to single journey type by suitable Daily Pass / Monthly Pass Factors (DPMP factor). The following table shows DPMP factors adopted for each toll plaza on project stretch.

Table 3-6 : Journey Type factor at Sakatpura/Nayagaon Toll Plaza KM 1055+217/ Km 1058+837

Sr. No	Type	DP/MP Factors
		2023-24
1	Car / Jeep / Van	0.850
2	Mini LCV	0.800
3	LCV	0.900
4	Minibus	0.850
5	Bus	0.900
6	Truck - 2 Axle	0.920
7	3 - Axle	0.900
8	4 - 6 Axle	0.900
9	7 & above Axle	0.950

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP

  b) NSDP
  c) Population Growth
  d) Per Capita Income growth
  e) Industrial Growth
  f) Special Industry Potential
  g) Regional and National development vision / plan
  h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor. Same is discussed in subsequent chapter.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

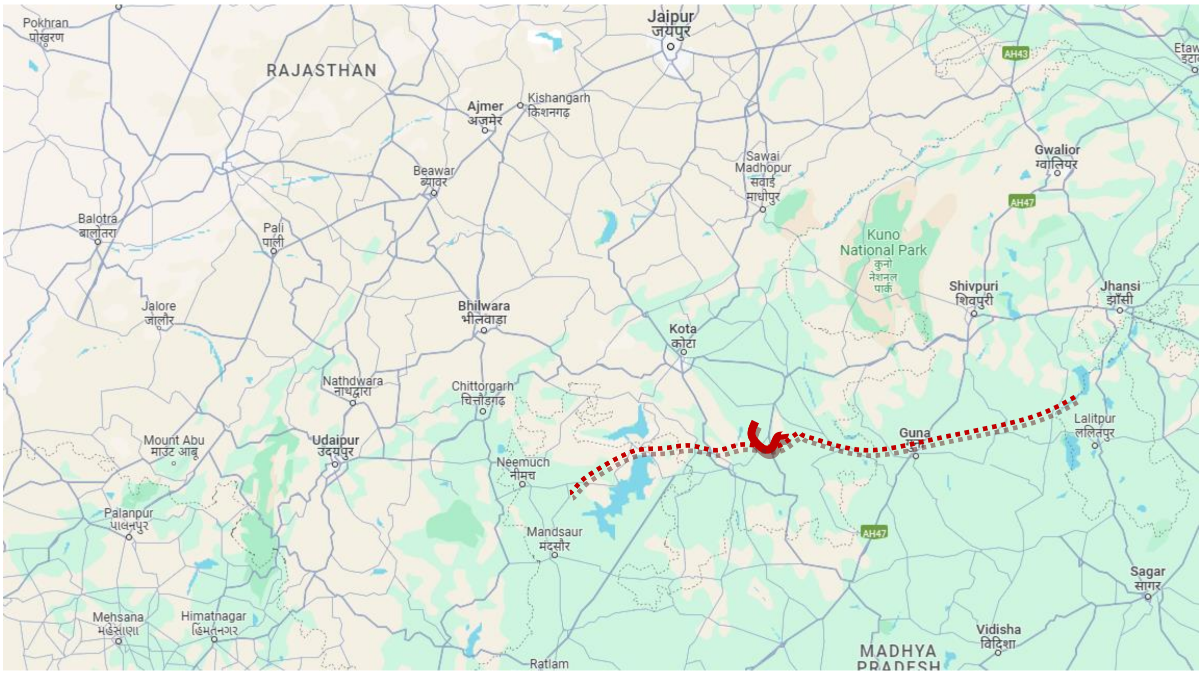
Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Regional Network

Kota Bypass is part of NH-27 which is major East – West connectivity in India. As can be seen from the data made available that most of the traffic on Kota Bypass is either local in nature or is part of East – West connectivity corridor. Gwalior, Chittorgarh, Jhalawar, Bhilwara areas have major influence on project traffic.



In such case upcoming corridors like Delhi Mumbai Expressway or Mumbai Vadodara Expressway or DFCC which basically cater for North -South connectivity, are not expected to have any substantial impact on project road traffic.

Delhi – Mumbai Expressway - The access controlled greenfield expressway connects Delhi and Mumbai (up to Jawaharlal Nehru Port Trust) and passes through states of Haryana, Rajasthan, Madhya Pradesh, Gujarat and Maharashtra. DME alignment will largely cater to traffic between North of India and Gujarat/Western Maharashtra and is not likely to affect traffic on the project road which caters to traffic on East – West connectivity and local traffic.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor of Kota Bypass from Km 1052+429 to Km 1080+249 section of NH-27 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-12015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = k x Log (EI) + A

Where,

P = Number of Vehicles (Mode wise)

EI = Economic Indicator

A = Regression constant

k = Elasticity coefficient (Regression coefficient)

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Rajasthan. Toll plazas at Sakatpura and Nayagaon in the state of Rajasthan. Project traffic has share of majorly states like Rajasthan, Madhya Pradesh, Uttar Pradesh, Gujrat and Delhi. For elasticity calculations, working data from these states also has been analysed.

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-1 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	57192	591069	4.76	5.77		
2012	58441	659542	4.77	5.82	2%	
2013	61053	733916	4.79	5.87	4%	
2014	64496	814079	4.81	5.91	6%	
2015	68565	899307	4.84	5.95	6%	
2016	71324	988391	4.85	5.99	4%	
2017	73109	1095526	4.86	6.04	3%	
2018	75555	1204005	4.88	6.08	3%	4.1%

Regression analysis of same is given in figure below.

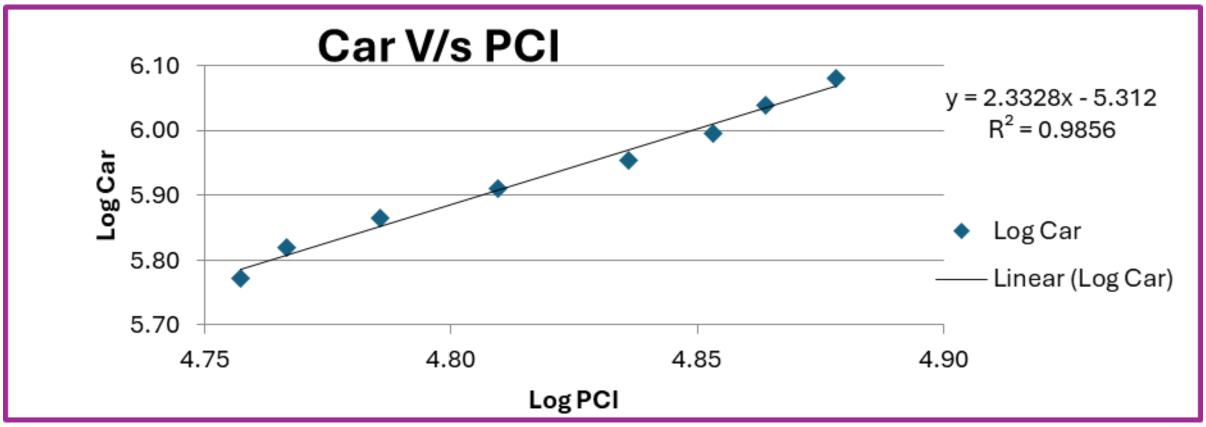


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-2 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	68548000	83345	7.84	4.92		
2012	69687000	88616	7.84	4.95	2%	
2013	70825000	93892	7.85	4.97	2%	
2014	71963000	97650	7.86	4.99	2%	
2015	73102000	102818	7.86	5.01	2%	
2016	74240000	108680	7.87	5.04	2%	
2017	75248000	113964	7.88	5.06	1%	
2018	76256000	118301	7.88	5.07	1%	1.5%

Regression analysis of same is given in figure below.

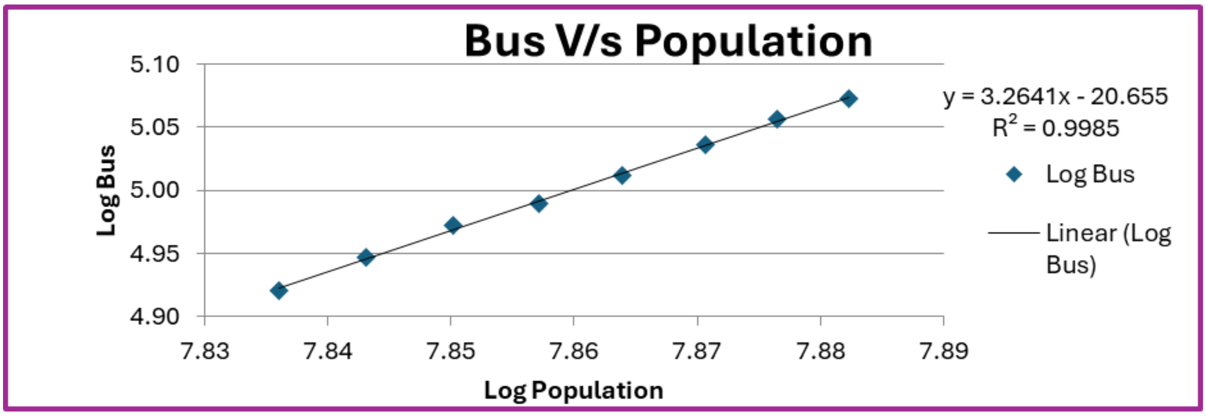


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : Trucks Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	39533093	362028	7.60	5.56		
2012	40980249	401983	7.61	5.60	4%	
2013	43429222	434379	7.64	5.64	6%	
2014	46540773	472365	7.67	5.67	7%	
2015	50192151	517604	7.70	5.71	8%	
2016	52965038	561158	7.72	5.75	6%	
2017	55442912	613055	7.74	5.79	5%	
2018	58059438	665926	7.76	5.82	5%	5.7%

The following figure depicts regression analysis and extrapolation.

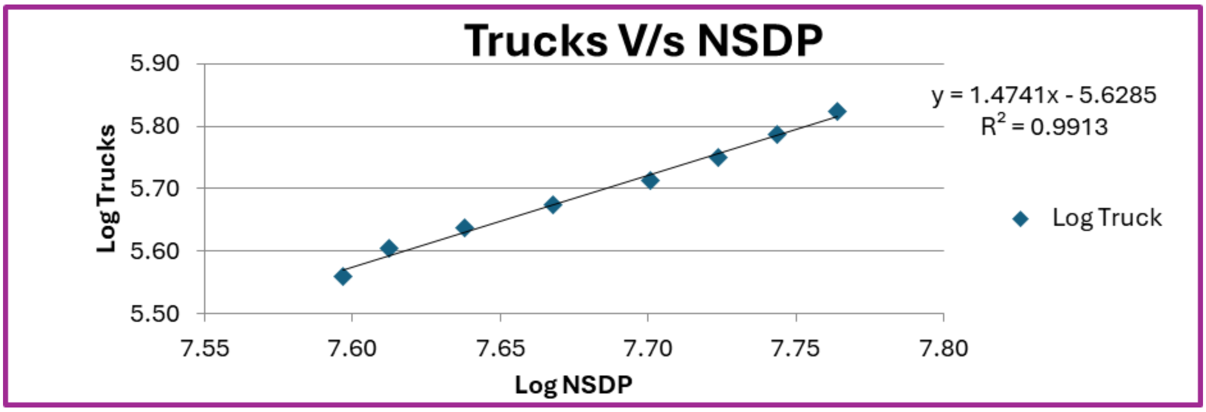


Figure 5-3 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Rajasthan.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-4 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
RAJASTHAN	**Car/Jeep**	PCI	y = 2.3328x - - 5.312	R^2 = 0.9856	2.3328	4.07%	9.49%	Good Regression

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
	Bus	Population	y = 3.2641x - - 20.6548	R^2 = 0.9985	3.2641	1.53%	5.01%	Good Regression
	Truck	NSDP	y = 1.4741x - - 5.6285	R^2 = 0.9913	1.4741	5.65%	8.33%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Madhya Pradesh State.

Table 5-5 : Per Capita Income Vs Car Madhya Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	38497	424644	4.59	5.63		
2012	41142	493412	4.61	5.69	7%	
2013	42548	555461	4.63	5.74	3%	
2014	44027	637626	4.64	5.80	3%	
2015	47351	820391	4.68	5.91	8%	
2016	52782	869777	4.72	5.94	11%	
2017	54829	982124	4.74	5.99	4%	
2018	57401	1087124	4.76	6.04	5%	5.9%

Regression analysis of same is given in figure below.

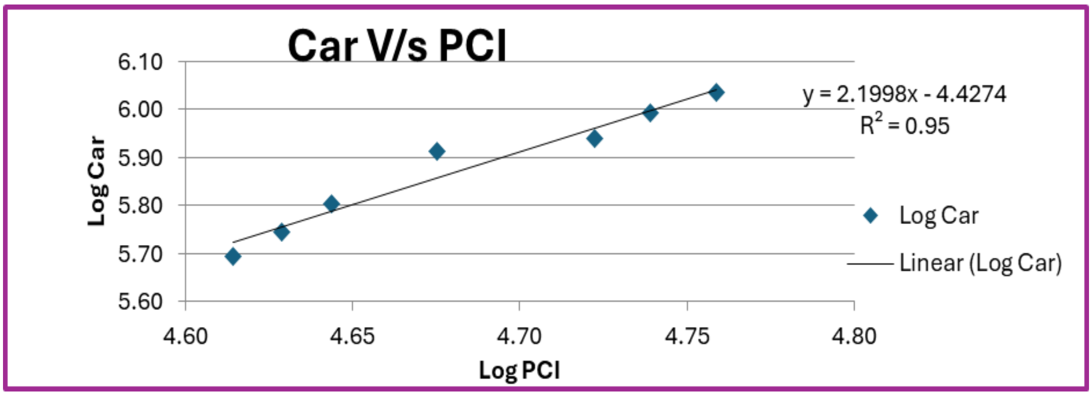


Figure 5-4 : Regression and Elasticity PCI vs. Car – Extrapolation Madhya Pradesh

Table 5-6 : Population Vs Bus Madhya Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	72627000	181770	7.86	5.26		
2012	73863000	208530	7.87	5.32	2%	
2013	75099000	233569	7.88	5.37	2%	
2014	76334000	277898	7.88	5.44	2%	
2015	77570000	322227	7.89	5.51	2%	
2016	78806000	347227	7.90	5.54	2%	
2017	79948000	382227	7.90	5.58	1%	
2018	81090000	402227	7.91	5.60	1%	1.6%

Regression analysis of same is given in figure below.

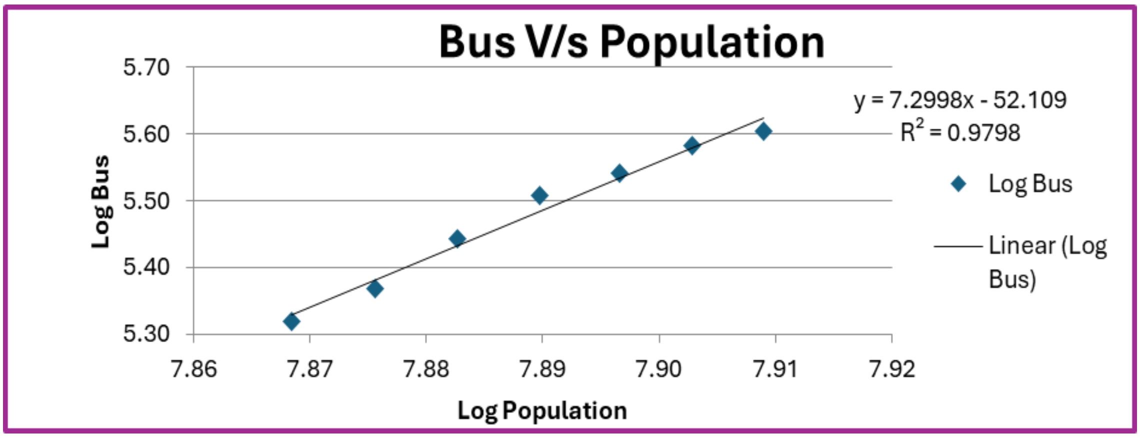


Figure 5-5 : Regression and Elasticity Population vs. Bus – Extrapolation Madhya Pradesh

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-7 : Trucks Vs NSDP Madhya Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	28237104	121916	7.45	5.09		
2012	30685334	131098	7.49	5.12	9%	
2013	32259760	137815	7.51	5.14	5%	
2014	33924690	150921	7.53	5.18	5%	

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2015	37071567	177352	7.57	5.25	9%	
2016	41946525	233553	7.62	5.37	13%	
2017	44200243	289754	7.65	5.46	5%	
2018	46928896	326291	7.67	5.51	6%	7.6%

The following figure depicts regression analysis and extrapolation.

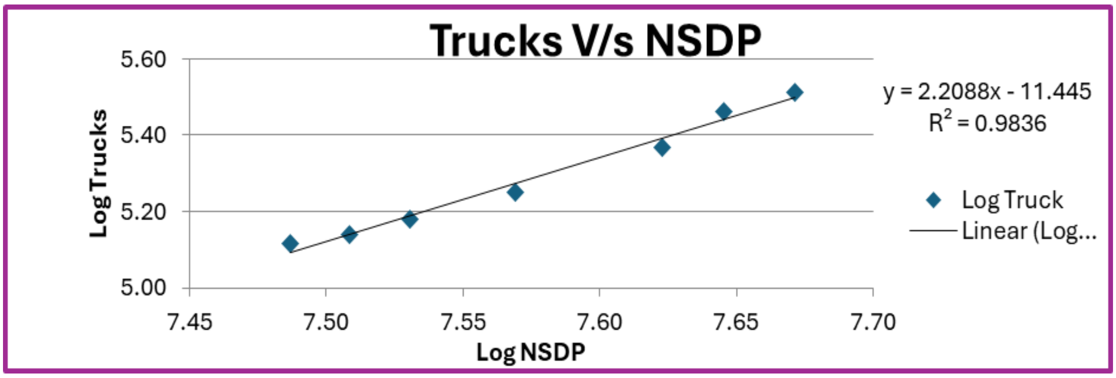


Figure 5-6 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Madhya Pradesh.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-8 : Summary Regression Analysis Madhya Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
MADHYA PRADESH	**Car/Jeep**	PCI	y = 2.2965x - - 4.8829	R^2 = 0.9634	2.3	6%	13.57%	Good Regression
	Bus	Population	y = 7.4978x - - 53.6722	R^2 = 0.9862	7.5	2%	11.90%	Good Regression
	Truck	NSDP	y = 2.2088x - - 11.4451	R^2 = 0.9694	2.2	8%	16.70%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Uttar Pradesh State.

Table 5-9 : Per Capita Income Vs Car Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	32002	1108100	4.51	6.04		
2012	32908	1205374	4.52	6.08	3%	
2013	34044	1423020	4.53	6.15	3%	
2014	34583	1572217	4.54	6.20	2%	
2015	36973	1746117	4.57	6.24	7%	
2016	40847	2027972	4.61	6.31	10%	
2017	41832	2195783	4.62	6.34	2%	
2018	43670	2439845	4.64	6.39	4%	4.6%

Regression analysis of same is given in figure below.

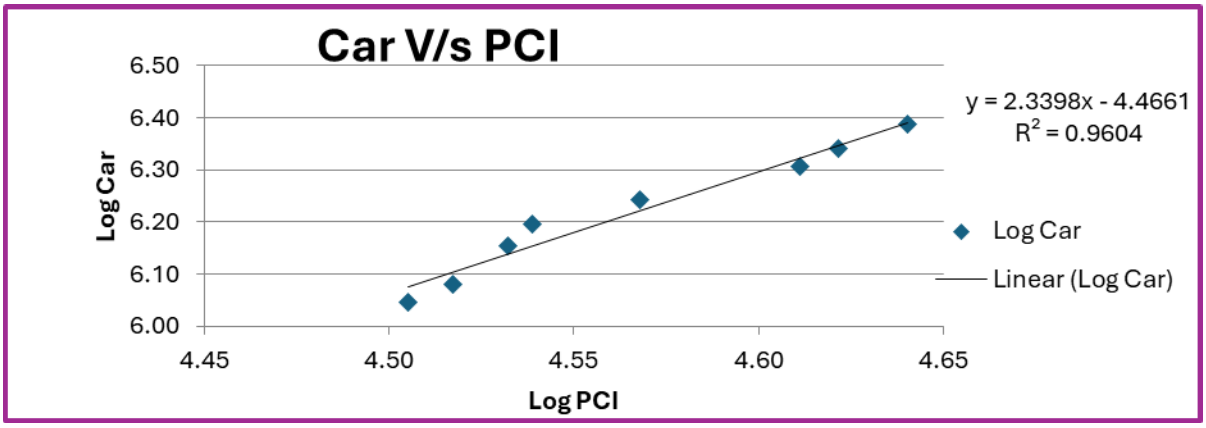


Figure 5-7 : Regression and Elasticity PCI vs. Car – Extrapolation Uttar Pradesh

Table 5-10 : Population Vs Bus Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	199812000	57901	8.30	4.76		
2012	203670000	64147	8.31	4.81	2%	
2013	206322000	74389	8.31	4.87	1%	
2014	209577000	80460	8.32	4.91	2%	
2015	212832000	89127	8.33	4.95	2%	
2016	216870000	112020	8.34	5.05	2%	
2017	219510000	112766	8.34	5.05	1%	
2018	222150000	121975	8.35	5.09	1%	1.5%

Regression analysis of same is given in figure below.

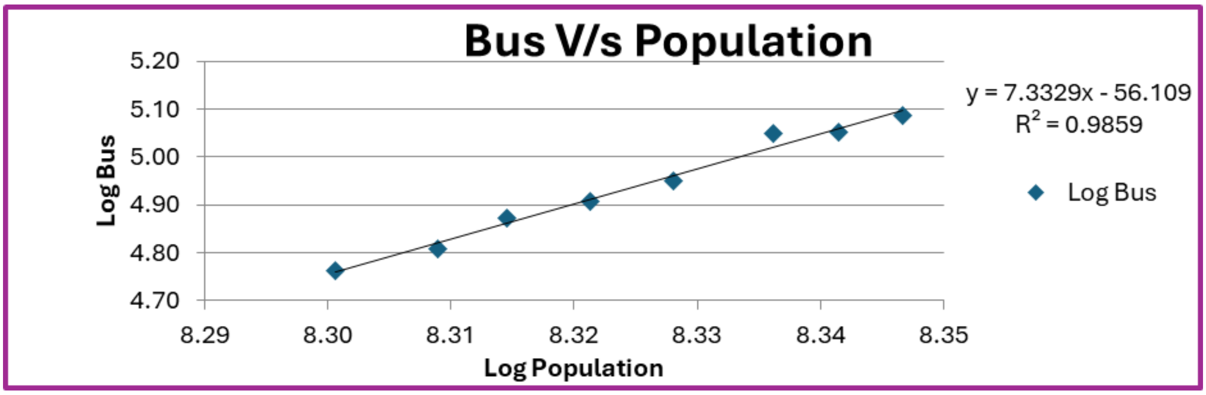


Figure 5-8 : Regression and Elasticity Population vs. Bus – Extrapolation Uttar Pradesh

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-11 : Trucks Vs NSDP Uutar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	64513155	162813	7.81	5.21		
2012	67355218	186404	7.83	5.27	4%	
2013	70746910	202761	7.85	5.31	5%	
2014	72968630	217609	7.86	5.34	3%	
2015	79204874	245688	7.90	5.39	9%	
2016	88845325	265167	7.95	5.42	12%	
2017	92380571	307096	7.97	5.49	4%	
2018	97915937	356828	7.99	5.55	6%	6.2%

The following figure depicts regression analysis and extrapolation.

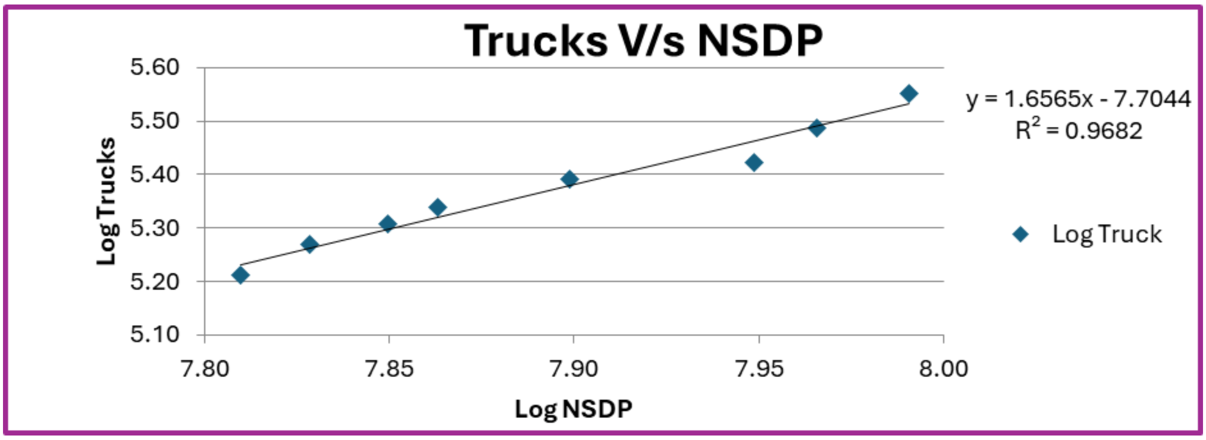


Figure 5-9 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Uttar Pradesh.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-12 : Summary Regression Analysis Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
UTTAR PRADESH	**Car/Jeep**	PCI	y = 2.3398x - - 4.4661	R² = 0.9604	2.3398	4.58%	10.72%	Good Regression
	Bus	Population	y = 7.3329x - - 56.1092	R² = 0.9859	7.3329	1.53%	11.19%	Good Regression
	Truck	NSDP	y = 1.6565x - - 7.7044	R² = 0.9682	1.6565	6.18%	10.24%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Gujrat State.

Table 5-13 : Per Capita Income Vs Car Gujrat

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	87481	1411898	4.94	6.15		

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2012	96683	1602129	4.99	6.20	11%	
2013	102589	1771298	5.01	6.25	6%	
2014	111370	2008748	5.05	6.30	9%	
2015	120683	2260084	5.08	6.35	8%	
2016	129738	2527537	5.11	6.40	8%	
2017	143604	2794957	5.16	6.45	11%	
2018	154887	3011656	5.19	6.48	8%	8.5%

Regression analysis of same is given in figure below.

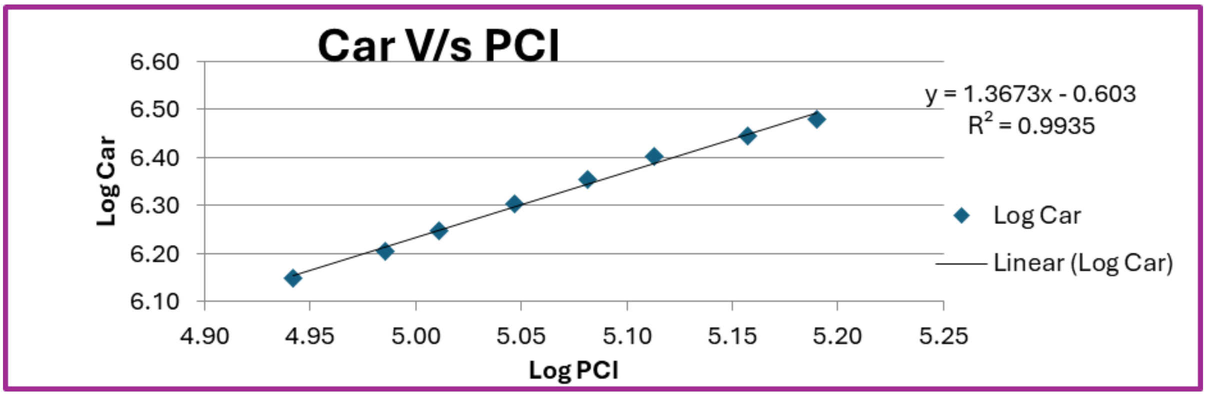


Figure 5-10 : Regression and Elasticity PCI vs. Car – Extrapolation Gujrat

Table 5-14 : Population Vs Bus Gujrat

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	60440000	67546	7.78	4.83		
2012	61383000	70615	7.79	4.85	2%	
2013	62327000	72998	7.79	4.86	2%	
2014	63271000	76435	7.80	4.88	2%	
2015	64214000	82734	7.81	4.92	1%	
2016	65158000	81911	7.81	4.91	1%	
2017	66084000	81087	7.82	4.91	1%	
2018	67010000	86156	7.83	4.94	1%	1.5%

Regression analysis of same is given in figure below.

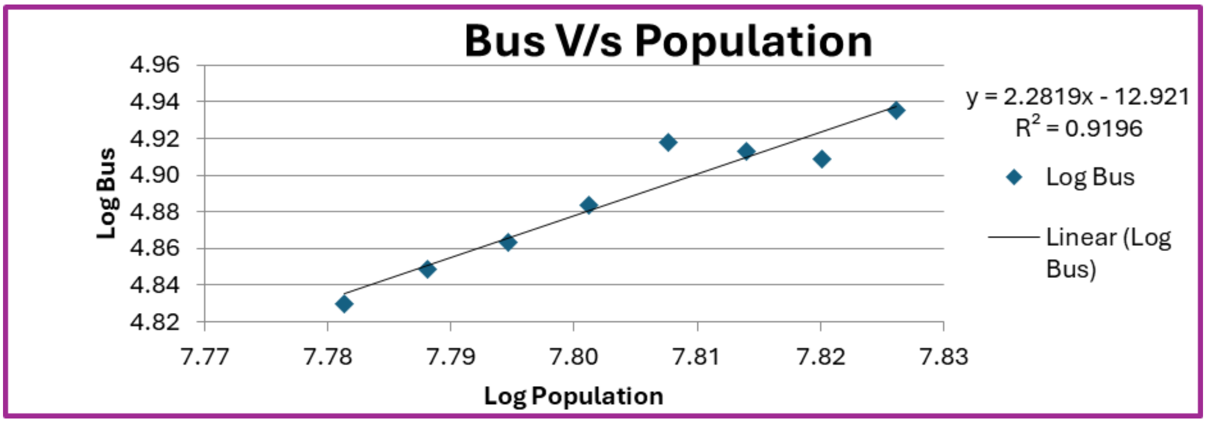


Figure 5-11 : Regression and Elasticity Population vs. Bus – Extrapolation Gujrat

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-15 : Trucks Vs NSDP Gujrat

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	53280946	301533	7.73	5.48		
2012	59665883	319207	7.78	5.50	12%	
2013	64148881	332185	7.81	5.52	8%	
2014	70562884	352225	7.85	5.55	10%	
2015	77477522	375265	7.89	5.57	10%	
2016	84393034	396061	7.93	5.60	9%	
2017	94651119	425799	7.98	5.63	12%	
2018	103439901	457299	8.01	5.66	9%	10.0%

The following figure depicts regression analysis and extrapolation.

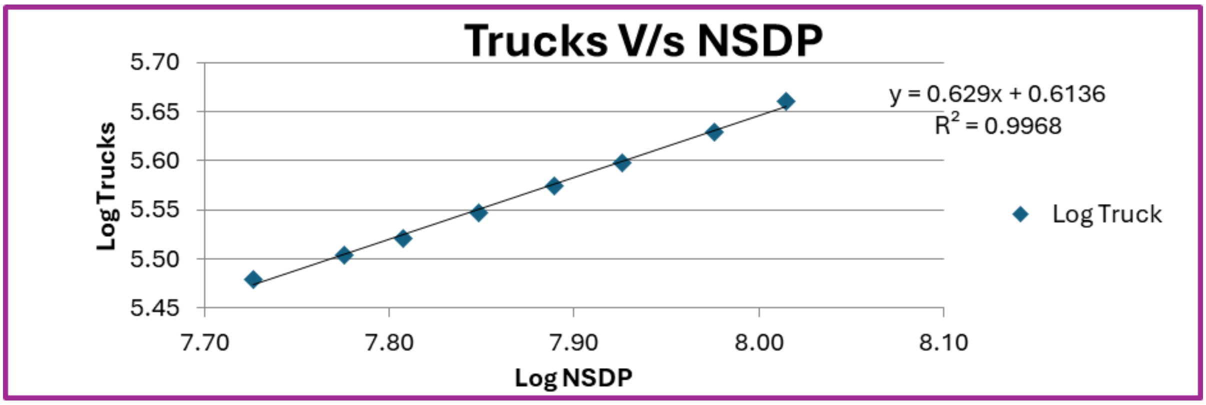


Figure 5-12 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Gujrat.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-16 : Summary Regression Analysis Gujrat

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
GUJRAT	**Car/Jeep**	PCI	y = 1.3673x - - 0.603	R^2 = 0.9935	1.3673	8.51%	11.64%	Good Regression
	Bus	Population	y = 2.2819x - - 12.9206	R^2 = 0.9196	2.2819	1.49%	3.39%	Good Regression
	Truck	NSDP	y = 0.629x - 0.6136	R^2 = 0.9968	0.6290	9.95%	6.26%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Delhi State.

Table 5-17 : Per Capita Income Vs Car Delhi

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	185001	2172069	5.27	6.34		
2012	192220	2416974	5.28	6.38	4%	
2013	200702	2568380	5.30	6.41	4%	
2014	213669	2730071	5.33	6.44	6%	
2015	233115	2986579	5.37	6.48	9%	
2016	244255	3061817	5.39	6.49	5%	
2017	252960	3087309	5.40	6.49	4%	
2018	260967	3249670	5.42	6.51	3%	5.1%

Regression analysis of same is given in figure below.

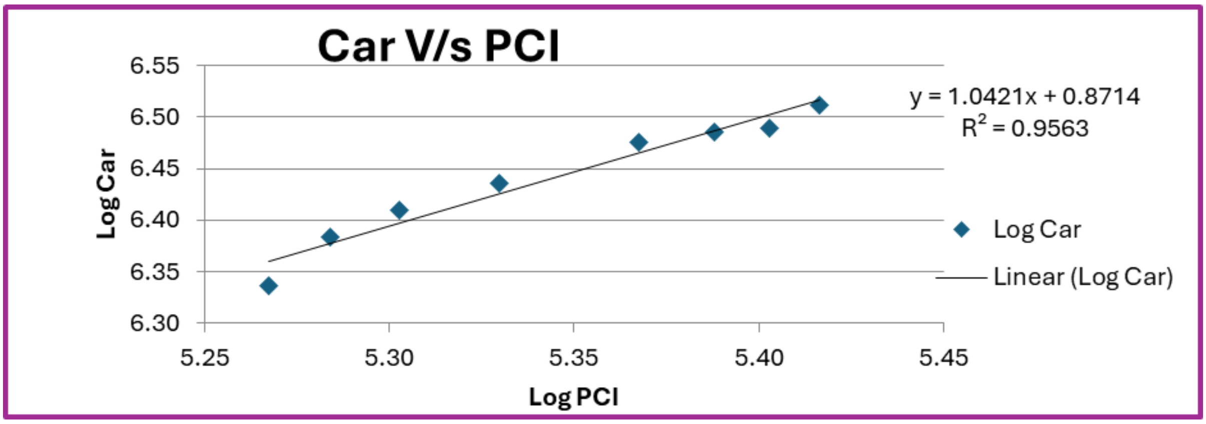


Figure 5-13 : Regression and Elasticity PCI vs. Car – Extrapolation Delhi

Table 5-18 : Population Vs Bus Delhi

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	16788000	20142	7.22	4.30		
2012	17166000	24642	7.23	4.39	2%	
2013	17544000	28142	7.24	4.45	2%	
2014	17921000	33342	7.25	4.52	2%	
2015	18299000	43723	7.26	4.64	2%	
2016	18677000	51823	7.27	4.71	2%	
2017	19056000	61023	7.28	4.79	2%	
2018	19435000	71043	7.29	4.85	2%	2.1%

Regression analysis of same is given in figure below.

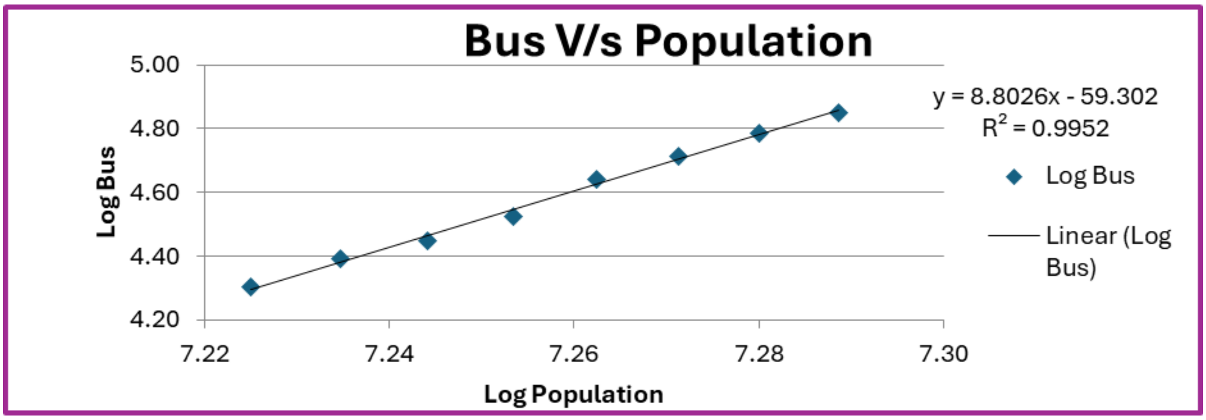


Figure 5-14 : Regression and Elasticity Population vs. Bus – Extrapolation Delhi

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-19 : Trucks Vs NSDP Delhi

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	31465002	149277	7.50	5.17		
2012	33419330	157277	7.52	5.20	6%	
2013	35652751	165477	7.55	5.22	7%	
2014	38763874	174577	7.59	5.24	9%	
2015	43172959	185027	7.64	5.27	11%	
2016	46159238	196527	7.66	5.29	7%	
2017	48763115	208417	7.69	5.32	6%	
2018	51295715	220417	7.71	5.34	5%	7.2%

The following figure depicts regression analysis and extrapolation.

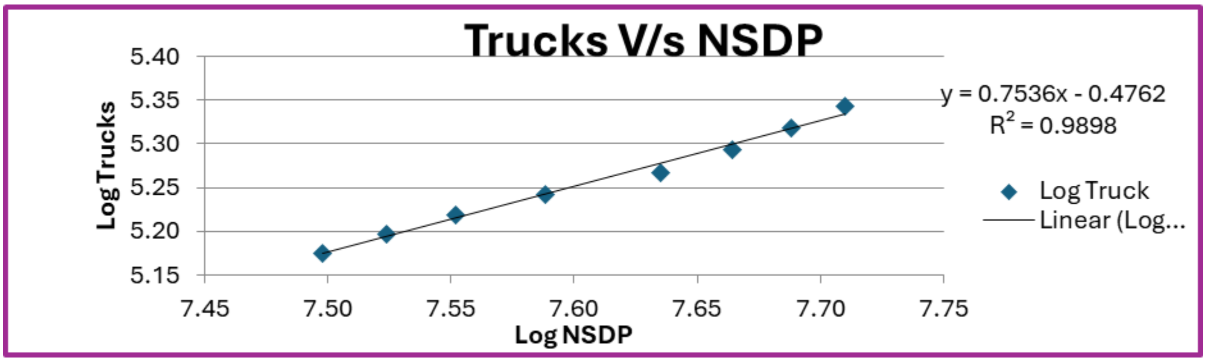


Figure 5-15 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Delhi.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-20 : Summary Regression Analysis Delhi

Economical model for predicting growth is good tool, however other local, regional, national factors

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
DELHI	**Car/Jeep**	PCI	y = 1.0421x - 0.8714	R^2 = 0.9563	1.0421	5.05%	5.27%	Good Regression
	Bus	Population	y = 8.8026x - - 59.3021	R^2 = 0.9952	8.8026	2.11%	18.61%	Good Regression
	Truck	NSDP	y = 0.7536x - - 0.4762	R^2 = 0.9898	0.7536	7.25%	5.46%	Good Regression

should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Kota Bypass has recently been awarded to Concessionaire. Hence credible historical traffic data is currently not available.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

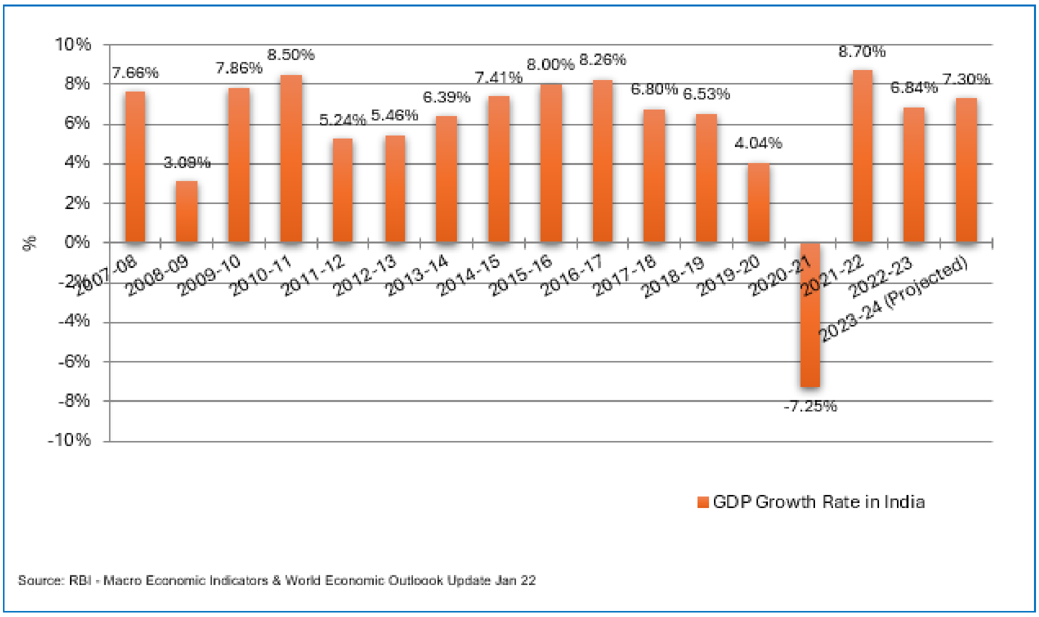


Figure 5-16 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. Leading banking and financial institutions have estimated that India would keep on registering good growth in coming years and the growth in year 2023-24 is expected to be around 7.3%.

5.6 Developments along and around the Project Corridor & State

RAJASTHAN: Rajasthan is a state where tradition and glory meet in the midst of colours. It is endowed with magnificent forts, palaces, havellies, natural resources, heritage, beauty and culture. With the lofty hills of Aravali-one of the oldest mountain ranges of the world and the golden sand dunes of the Great Indian Desert, Rajasthan is the only desert of the sub-continent. Rajasthan is located in the north-western region of India. It is the largest State in the Republic of India. It forms a corridor between the northern and the western states in the country.

KOTA DISTRICT: Kota district is one of the fifty districts of Rajasthan state. Kota is also the educational headquarters of this state. The town is considered as the Coaching Centre Hub of India.

Overall Rajasthan has 11th rank in India in terms of GDP. The state economy has shown promising growth in the past year in the range of 8-9% and it is expected that this would continue to grow in the same pattern and would contribute to growth of economy of country and region.

From the above it can be expected that the project corridor would serve as one of the important transportation links in the area and would contribute to the growth of the region.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry Favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth has been suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.25% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Stretch

Table 5-21 : Recommended Growth Rates Optimistic

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	8.48%	7.48%	6.62%	6.39%	5.51%
Mini LCV	4.78%	3.29%	2.38%	2.01%	2.79%
Bus	4.09%	2.58%	2.36%	2.14%	1.94%
Mini - Bus	4.09%	2.58%	2.36%	2.14%	1.94%
LCV	4.78%	3.29%	2.38%	2.01%	1.82%
2- Axle	4.43%	3.29%	2.38%	2.01%	1.82%
3 - Axle	4.43%	3.29%	2.38%	2.01%	1.82%
4 to6 Axle	5.82%	4.31%	3.09%	2.60%	2.34%
7 and Above Axle	4.43%	3.29%	2.38%	2.01%	1.82%

Table 5-22 : Recommended Growth Rates Pessimistic

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	7.98%	6.98%	6.12%	5.89%	5.01%
Mini LCV	4.28%	2.79%	1.88%	1.51%	2.29%
Bus	3.59%	2.08%	1.86%	1.64%	1.44%
Mini - Bus	3.59%	2.08%	1.86%	1.64%	1.44%
LCV	4.28%	2.79%	1.88%	1.51%	1.32%
2- Axle	3.93%	2.79%	1.88%	1.51%	1.32%
3 - Axle	3.93%	2.79%	1.88%	1.51%	1.32%
4 to6 Axle	5.32%	3.81%	2.59%	2.10%	1.84%
7 and Above Axle	3.93%	2.79%	1.88%	1.51%	1.32%

Table 5-23 : Recommended Growth Rates Most Likely

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	8.23%	7.23%	6.37%	6.14%	5.26%
Mini LCV	4.53%	3.04%	2.13%	1.76%	2.54%
Bus	3.84%	2.33%	2.11%	1.89%	1.69%
Mini - Bus	3.84%	2.33%	2.11%	1.89%	1.69%
LCV	4.53%	3.04%	2.13%	1.76%	1.57%
2- Axle	4.18%	3.04%	2.13%	1.76%	1.57%
3 - Axle	4.18%	3.04%	2.13%	1.76%	1.57%
4 to6 Axle	5.57%	4.06%	2.84%	2.35%	2.09%
7 and Above Axle	4.18%	3.04%	2.13%	1.76%	1.57%

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza - Chainage 1055+217 KM/1058+837 KM (Optimistic Growth Scenario)

Year	Car/Jeep / Van	Mini LCV	Bus	Minibus	LCV	2-Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Traffic	PCU (Including Exempted)
2024-25	3687	350	56	15	538	562	778	2638	0	8624	20926
2025-26	4000	367	58	16	564	587	812	2792	0	9196	22172
2026-27	4339	385	60	17	591	613	848	2955	0	9808	23497
2027-28	4707	403	62	18	619	640	886	3127	0	10462	24901
2028-29	5106	422	65	19	649	668	925	3309	0	11163	26395
2029-30	5488	436	67	19	670	690	955	3452	0	11777	27628
2030-31	5899	450	69	19	692	713	986	3601	0	12429	28924
2031-32	6340	465	71	19	715	736	1018	3756	0	13120	30283
2032-33	6814	480	73	19	739	760	1052	3918	0	13855	31717
2033-34	7324	496	75	19	763	785	1087	4087	0	14636	33226
2034-35	7809	508	77	19	781	804	1113	4213	0	15324	34458
2035-36	8326	520	79	19	800	823	1139	4343	0	16049	35741
2036-37	8877	532	81	19	819	843	1166	4477	0	16814	37083
2037-38	9465	545	83	19	838	863	1194	4615	0	17622	38483
2038-39	10092	558	85	19	858	884	1222	4758	0	18476	39950
2039-40	10736	569	87	19	875	902	1247	4882	0	19317	41323
2040-41	11422	580	89	19	893	920	1272	5009	0	20204	42754
2041-42	12151	592	91	19	911	939	1298	5139	0	21140	44248
2042-43	12927	604	93	19	929	958	1324	5273	0	22127	45807
2043-44	13753	616	95	19	948	977	1351	5410	0	23169	47434

Table 6-2 : Total Tollable Traffic @ Toll Plaza 1 - Chainage 1055+217 KM/1058+837 KM

(Pessimistic Growth Scenario)

Year	Car/Jeep / Van	Mini LCV	Bus	Minibus	LCV	2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Traffic	PCU (Including Exempted)
2024-25	3670	348	56	15	535	559	774	2626	0	8583	20827
2025-26	3963	363	58	16	558	581	804	2766	0	9109	21963
2026-27	4279	379	60	17	582	604	836	2913	0	9670	23165
2027-28	4620	395	62	18	607	628	869	3068	0	10267	24436
2028-29	4989	412	64	19	633	653	903	3231	0	10904	25779
2029-30	5337	424	65	19	651	671	928	3354	0	11449	26851
2030-31	5710	436	66	19	669	690	954	3482	0	12026	27977
2031-32	6109	448	67	19	688	709	981	3615	0	12636	29156
2032-33	6536	461	68	19	707	729	1008	3753	0	13281	30390
2033-34	6992	474	69	19	727	749	1036	3896	0	13962	31679
2034-35	7420	483	70	19	741	763	1055	3997	0	14548	32694
2035-36	7874	492	71	19	755	777	1075	4100	0	15163	33746
2036-37	8356	501	72	19	769	792	1095	4206	0	15810	34843
2037-38	8867	510	73	19	783	807	1116	4315	0	16490	35986
2038-39	9410	520	74	19	798	822	1137	4427	0	17207	37176
2039-40	9964	528	75	19	810	834	1154	4520	0	17904	38265
2040-41	10550	536	76	19	822	847	1171	4615	0	18636	39397
2041-42	11171	544	77	19	834	860	1189	4712	0	19406	40577
2042-43	11829	552	78	19	847	873	1207	4811	0	20216	41804
2043-44	12525	560	79	19	860	886	1225	4912	0	21066	43078

Traffic projections for Most Likely scenario is given as under

Table 6-3 : Total Tollable Traffic @ Toll Plaza 1 - Chainage 1055+217 KM/1055+217 KM/1058+837 KM

(Most Likely Growth Scenario)

Year	Car/Jeep / Van	Mini LCV	Bus	Minibus	LCV	2- Axle	3 - Axle	4 to6 Axle	7 and Above Axle	Total Traffic	PCU (Including Exempted)
2024-25	3679	349	56	15	536	560	776	2632	0	8603	20875
2025-26	3982	365	58	16	560	583	808	2779	0	9151	22064
2026-27	4310	382	60	17	585	607	842	2934	0	9737	23325
2027-28	4665	399	62	18	611	632	877	3097	0	10361	24657
2028-29	5049	417	64	19	639	658	914	3270	0	11030	26076
2029-30	5414	430	65	19	658	678	942	3403	0	11609	27228
2030-31	5806	443	67	19	678	699	971	3541	0	12224	28440
2031-32	6226	456	69	19	699	720	1001	3685	0	12875	29712
2032-33	6676	470	71	19	720	742	1031	3835	0	13564	31044

Year	Car/Jeep / Van	Mini LCV	Bus	Minibus	LCV	2- Axle	3 - Axle	4 to6 Axle	7 and Above Axle	Total Traffic	PCU (Including Exempted)
2033-34	7159	484	73	19	742	765	1062	3991	0	14295	32444
2034-35	7615	494	75	19	758	781	1085	4104	0	14931	33566
2035-36	8100	505	77	19	774	798	1108	4220	0	15601	34734
2036-37	8616	516	79	19	790	815	1132	4340	0	16307	35954
2037-38	9165	527	81	19	807	832	1156	4463	0	17050	37222
2038-39	9749	538	83	19	824	850	1181	4590	0	17834	38549
2039-40	10347	547	85	19	839	865	1202	4698	0	18602	39778
2040-41	10982	557	87	19	854	880	1223	4808	0	19410	41055
2041-42	11656	567	89	19	869	896	1245	4921	0	20262	42390
2042-43	12371	577	91	19	884	912	1267	5037	0	21158	43779
2043-44	13130	587	93	19	900	928	1289	5155	0	22101	45223

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued at fee at 2/3rd rate for 50 single journey trips.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
   a) Local Car Jeep Van - Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza)

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A} - \text{WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2022-23. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

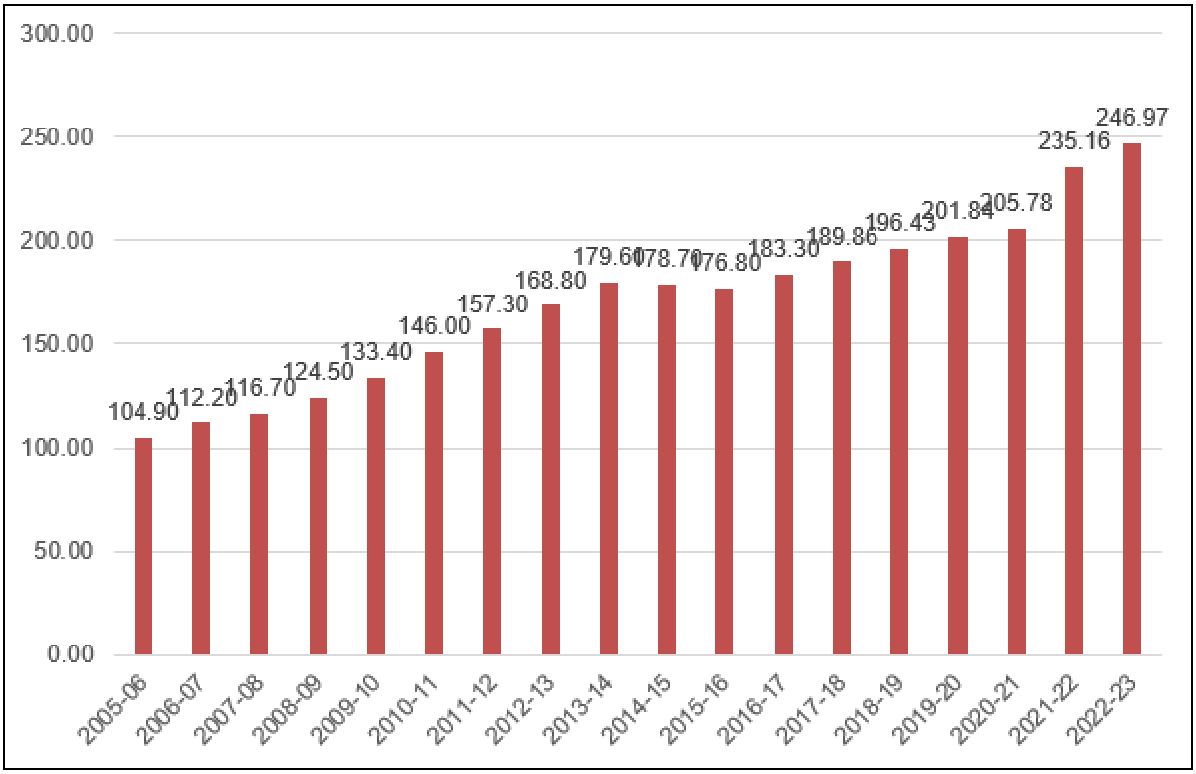


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Oversized Vehicles (7 or more Axles)	4.20

These rates are then modified for as per procedure provided in guidelines of notification considering factors listed below.

- Annual revision of fee rate - @3%
- Application of WPI

Base rates have been worked out to map the current rates. These shall be updated when more details come in. Base toll rates are given below.

Table 7-2 : Toll Rates for Year 2023-24 (Rs. Rupees) @ Toll Plaza 1 - Chainage 1055+217 KM/1055+217 KM/1058+837 KM

Sr.no	Type of Vehicle	Rates (2023-24)
1	Car / Jeep / Van	80.00
2	Mini LCV	80.00
3	Bus	260.00
4	Minibus	125.00
5	LCV	125.00
6	Truck - 2 Axle	260.00
7	3 - Axle	285.00
8	4 - 6 Axle	410.00
9	7 & above Axle	500.00

Above rates are applicable for base year 2023-24. These rates have been escalated for future.
year as NHAI policy and MORTH guideline for future revenue working

Table 7-3 : Toll Rates for Forecasting Year (Rs. Rupees) @ Toll Plaza 1 - Chainage 1055+217 KM/1055+217 KM/1058+837 KM

Year	Car/Jeep/Van	Mini LCV	Bus	Minibus	LCV	2-Axle	3 - Axle	4 to 6 Axle	7 and Above Axle
2024-25	80	80	270	130	130	270	295	420	515
2025-26	85	85	285	135	135	285	310	445	540
2026-27	90	90	295	140	140	295	325	465	565
2027-28	90	90	310	150	150	310	340	490	595
2028-29	95	95	330	155	155	330	360	515	625

Year	Car/Jeep/Van	Mini LCV	Bus	Minibus	LCV	2-Axle	3 - Axle	4 to 6 Axle	7 and Above Axle
2029-30	100	100	345	165	165	345	375	540	660
2030-31	105	105	360	175	175	360	395	570	690
2031-32	115	115	380	180	180	380	415	595	725
2032-33	120	120	400	190	190	400	435	630	765
2033-34	125	125	420	200	200	420	460	660	805
2034-35	130	130	445	210	210	445	485	695	845
2035-36	140	140	465	225	225	465	510	730	890
2036-37	145	145	490	235	235	490	535	770	940
2037-38	155	155	520	245	245	520	565	810	990
2038-39	160	160	545	260	260	545	595	855	1040
2039-40	170	170	575	275	275	575	625	900	1095
2040-41	180	180	605	290	290	605	660	950	1155
2041-42	190	190	640	305	305	640	695	1000	1220
2042-43	200	200	670	320	320	670	735	1055	1285
2043-44	210	210	710	340	340	710	775	1110	1355

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2043-44 years starting from the year 2023-24 are shown in tables below.

Table 7-4 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Location / Year	TP-01	Total
2024-25	61.85	61.85
2025-26	69.27	69.27
2026-27	76.76	76.76
2027-28	85.09	85.09
2028-29	94.64	94.64
2029-30	103.78	103.78
2030-31	114.33	114.33
2031-32	126.43	126.43

Location / Year	TP-01	Total
2032-33	139.06	139.06
2033-34	152.49	152.49
2034-35	165.99	165.99
2035-36	182.12	182.12
2036-37	197.56	197.56
2037-38	216.32	216.32
2038-39	235.41	235.41
2039-40	257.22	257.22
2040-41	279.87	279.87
2041-42	304.76	304.76
2042-43	332.01	332.01
2043-44	362.33	362.33

Table 7-5 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Location / Year	TP-01	Total
2024-25	61.56	61.56
2025-26	68.62	68.62
2026-27	75.68	75.68
2027-28	83.50	83.50
2028-29	92.43	92.43
2029-30	100.86	100.86
2030-31	110.59	110.59
2031-32	121.72	121.72
2032-33	133.23	133.23
2033-34	145.38	145.38
2034-35	157.48	157.48
2035-36	171.94	171.94
2036-37	185.61	185.61
2037-38	202.26	202.26
2038-39	219.04	219.04
2039-40	238.15	238.15
2040-41	257.86	257.86
2041-42	279.44	279.44
2042-43	302.95	302.95
2043-44	329.00	329.00

Table 7-6 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Location / Year	TP-01	Total
2024-25	61.70	61.70
2025-26	68.93	68.93
2026-27	76.20	76.20
2027-28	84.26	84.26
2028-29	93.50	93.50
2029-30	102.28	102.28
2030-31	112.42	112.42
2031-32	124.04	124.04
2032-33	136.11	136.11
2033-34	148.90	148.90
2034-35	161.69	161.69
2035-36	176.98	176.98
2036-37	191.54	191.54
2037-38	209.22	209.22
2038-39	227.14	227.14
2039-40	247.59	247.59
2040-41	268.73	268.73
2041-42	291.95	291.95
2042-43	317.29	317.29
2043-44	345.42	345.42

7.6 Modification in Concession Period

Modification of the concession period shall be done on the basis of Revenue targets given in the contract for milestones 1 & 2.

Modification in concession period as per provisions of DCA and same is summarized in table for all scenarios.

Pessimistic Case

Target Point 1- March 2033									
Target Month - March 2031	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period (Year)**	**Change in Concession period (Year)**	**Modified Concession Period**
TOT-13 - Kota	9.11	10.64	16.76 %	No	-	0.00%	20.00	0.00	

Target Point 2- March 2038											
Target Month - March 2038	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period (Year)**	**Change in Concession period**	**Total Change in Concession period (Year)**	**Calculated Modified Concession Period**	**Final Concession Period subject to Cap**
TOT-13 - Kota	16.81	17.59	4.63 %	No	-	0.00%	20.00	0.00	0.00	20.00	

Most likely Case

Target Point 1- March 2033									
Target Month - March 2031	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period (Year)**	**Change in Concession period (Year)**	**Modified Concession Period**
TOT-13 - Kota	9.11	10.86	19.16 %	No	-	0.00%	20.00	0.00	

Target Point 2- March 2038											
Target Month - March 2038	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period (Year)**	**Change in Concession period**	**Total Change in Concession period (Year)**	**Calculated Modified Concession Period**	**Final Concession Period subject to Cap**
TOT-13 - Kota	16.81	18.22	8.39 %	No	-	0.00%	20.00	0.00	0.00	20.00	

Optimistic Case

Target Point 1- March 2033									
Target Month - March 2031	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period (Year)**	**Change in Concession period (Year)**	**Modified Concession Period**
TOT-13 - Kota	9.11	11.08	21.63 %	Yes	1.63%	-1.22%	20.00	-0.24	

Target Point 2- March 2038											
Target Month - March 2038	**Target Revenue (Rs. Crores)**	**Calculated Revenue (Rs. Crores)**	**Difference %**	**If qualifies for Modification in Concession Period**	**Qualifying increment or shortfall**	**Change in Concession period %**	**Original Concession Period (Year)**	**Change in Concession period**	**Total Change in Concession period (Year)**	**Calculated Modified Concession Period**	**Final Concession Period subject to Cap**
TOT-13 - Kota	16.81	18.86	12.22 %	No	-	0.00%	20.00	0.00	-0.24	19.76	

TOT-13 (Kota bypass)-Modification in Concession Period						
Types of Scenarios	**Pessimistic Case**		**Most likely Case**		**Optimistic Case**	
Target Month	**Mar-31**	**Mar-38**	**Mar-31**	**Mar-38**	**Mar-31**	**Mar-38**
Target Revenue (Rs. Crores)	9.11	16.81	9.11	16.81	9.11	16.81
Calculated Revenue (Rs. Crores)	10.64	17.59	10.86	18.22	11.08	18.86
Differences %	16.76%	4.63%	19.16%	8.39%	21.63%	12.22%
If qualifies for Modification in Concession Period	No	No	No	No	Yes	No
Qualifying Increment or shortfall	-	-	-	-	1.63%	-
Change in Concession period %	0.00%	0.00%	0.00%	0.00%	-1.22%	0.00%
Original Concession Period	20.00	20.00	20.00	20.00	20.00	20.00
Change in Concession period	0.00	0.00	0.00	0.00	-0.24	0.00
Total Change in Concession period	0.00		0.00		-0.24	
Calculated Modified Concession Period	20.00		20.00		19.76	
Final Concession Period subject to Cap	0.00		0.00		0.00	

Thus, there is no modification expected in concession period due to variation in revenue as per above estimates in *Pessimistic & Most likely scenarios*.

Only negative variation of about 89 days in concession period is expected as per revenue in *Optimistic scenarios*.

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Kota Bypass from Km 1052+429 to Km 1080+249 section of NH-27 in state of Rajasthan is currently four lane road. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the important regional network East-West connectivity. Kota Bypass is part of Silchar – Porbandar East – West Corridor. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As discussed, dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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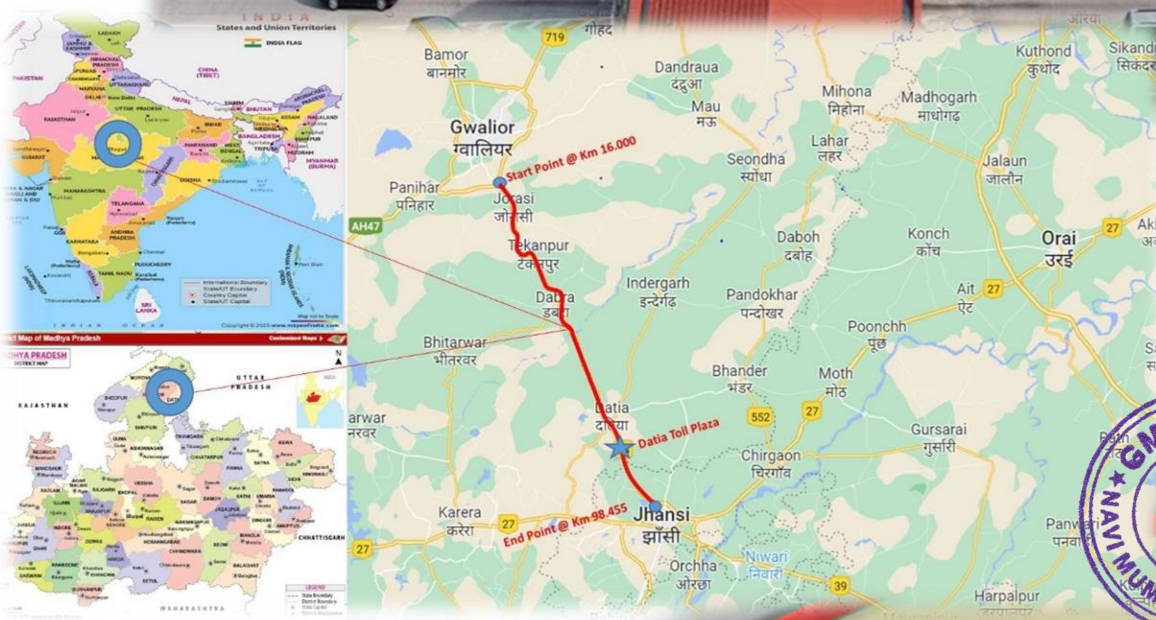
Gwalior -Jhansi section from km 16.000 to km 56.328 and km54.000 to km 98.455 of NH 75 (New NH-44) in the state of Madhya Pradesh and Uttar Pradesh

(TOT Bundle -13)



GMD CONSULTANTS NAVI MUMBAI

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

MARCH 2024

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GMD Adding Value

Gwalior -Jhansi section from km 16.000 to km 56.328 and km54.000 to km 98.455 of NH 75 (New NH-44) in the state of Madhya Pradesh and Uttar Pradesh

(TOT Bundle -13)

TRAFFIC STUDY & REVENUE PROJECTION REPORT
(FINAL)

MARCH 2024

GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The National Highways Authority of India (NHAI) introduced the Toll, Operate and Transfer (TOT) model for partnership with private developers in the road sector. Under this model, NHAI passes on the toll collection rights and operation and maintenance obligations for 20 years to the private developer against payment of upfront, one-time, lump sum concession fees quoted by the private developer as part of the comprehensive bidding process. Projects under this model are awarded as a bundle of operational national highways, which allows the investor to offset the risks of one project against another. Existing and operational roads are auctioned under the TOT model.

Under the Toll Operate and Transfer (ToT) 13 bundle, NHAI had invited tenders for selection of concessionaire for maintenance of the National Highway stretch from km 16.000 of NH-44 at Gwalior and ends at km 98.455 of NH-44 at Jhansi.

M/s. IRB Infrastructure Developers Limited., has been declared as the selected bidder for the project. This report is for part section of ToT bundle 13 “Gwalior to Jhansi from Km 16.00 to Km 98.455 section of NH-44 spanning in the states of Uttar Pradesh and Madhya Pradesh. Project Highway alignment is depicted in the following figure.

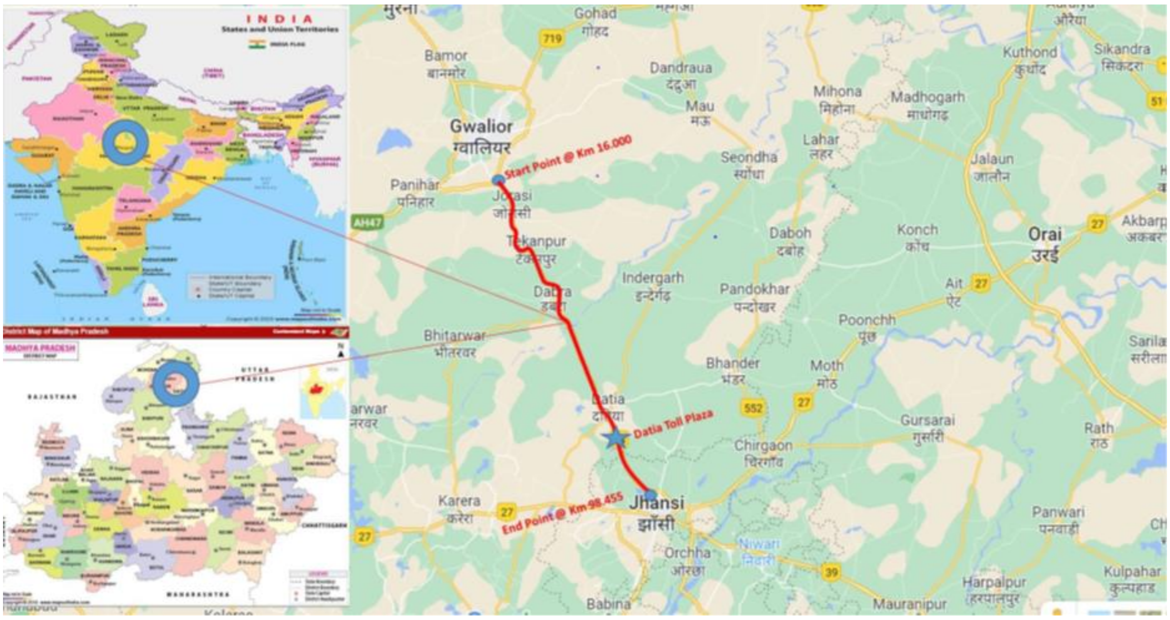

Figure 1-1: Project Stretch of ToT Bundle 13 (Part)

1.2 Objective of the Study

M/s IRB Infrastructure Developers Limited (IRB) intends to develop a traffic study report for Four Laning of Gwalior to Jhansi from Km 16.00 to Km 98.455 section of NH-44 on BOT basis. GMD Consultants have been assigned the work of conducting traffic study and developing revenue model based on traffic projections and forecast.

For making the proper assessment of traffic volume on project stretch, base year traffic and its projection, GMD Consultants have been provided with the basic survey and investigation report available with client. The base year traffic data is the primary input for determination of future traffic demand. With a view to estimate the base year traffic volume in different categories of goods and passenger carrying vehicles, the Classified Traffic Volume Count (CTVC) surveys, Turning Movement surveys (TMC), Registration Plate Survey (N.P.) & Origin-Destination (O-D) were conducted at Main Toll Plaza (MTP) and data of same is provided for study.

The year 2023-24 has been taken as the base year for projections and forecasting of traffic in the horizon year. This report fulfils part of the requirement of the assignment.

1.3 Scope of Services

Following may be referred to as broad scope of Traffic Study of Four Laning of Gwalior to Jhansi from Km 16.00 to Km 98.455 section of NH-44

Classified Traffic Volume Count at main toll plaza location at Toll Plaza locations. This data was supplied by the Concessionaire.

- Establishment of traffic pattern
- Working our traffic demand elasticity and growth
- Traffic forecast up to concession period.
- Preparation of revenue model up to concession period
- Any other analysis relevant to scope

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

The project stretch is a section of NH-44, which is the longest National Highway in the country, running through North, Central and South India. A major part of the project section from Gwalior to Jhansi Road lies in Gwalior and Datia district of Madhya Pradesh followed by Jhansi district. The major towns along the project corridor are Gwalior, Tekampur, Dabra, Datia and Jhansi.

Project Stretch Description

The project stretch under this study starts from km 16.000 of NH-44 at Gwalior in the state of Madhya Pradesh and ends at km 98.455 of NH-44 at Jhansi in the state of Uttar Pradesh. The length of project stretch is 80.127 km and has 4-lane configuration with single Toll Plaza (Dagrai village at ch.97.900 KM).

The following figure show this the alignment of project highway in above context.

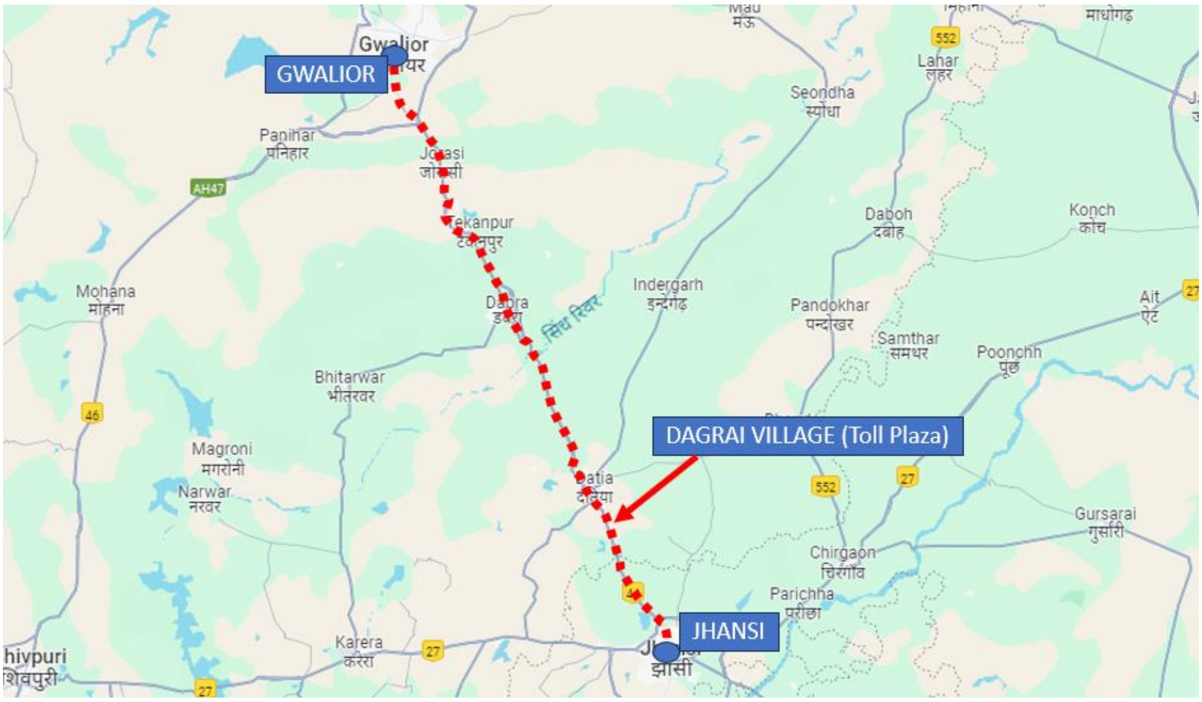

Figure 2-1 : Project Alignment with Toll Plaza

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for a project.

- Classified traffic volume counts at toll plaza locations on Gwalior- Jhansi section of NH-44- Provided by Concessionaire for base year 2023-24
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 97.900 Toll Plaza at Dagrai Village	AADT from previous traffic study report for year 2023-24	AADT from previous traffic study report for year 2023-24	AADT from previous traffic study report for year 2023-24	AADT from previous traffic study report for year 2023-24	AADT from previous traffic study report for year 2023-24

Toll plaza is located in Uttar Pradesh.

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations-based traffic survey done at project stretch.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below .

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)

Vehicle Type	
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since the project highway is currently under toll operation, the data collected corresponds to the category of tollable vehicles. The following are the types of vehicles as per concession agreement.

- Car / Jeep / van
- Minibus /LCV
- Bus
- Truck /
- 3 Axle commercial vehicle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data as per traffic survey conducted at toll plaza locations. It may not represent the whole year traffic as this pertains to specific period only. Hence a seasonality factor has been applied to average traffic of current period to arrive at Annual Average Daily Traffic of base year 2023-24. Same corrected traffic is used for future projections and revenue calculations. Following table shows Annual Average Daily Traffic (AADT) for year 2023-24 as considered.

Table 3-3 : Traffic Data at Dagrai Village Toll Plaza at Km 97.900

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car/Jeep/Van	4502
2	Mini LCV	363
3	Bus	210

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2023-24
4	Minibus	19
5	LCV	539
6	2- Axle	1026
7	3 - Axle	1253
8	4 to 6 Axle	1393
9	7 and Above Axle	0
	Total	**9,305**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in “IRC-64-1990: Guidelines for Capacity of Roads in Rural areas”. The adopted passenger car unit values (PCU) are presented in Table 3-4.

Table 3-4 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5

Vehicle Type	PCUs
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-5 : Traffic in PCU at Project Stretch

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2023-2024	Km 97.900 Toll Plaza at Dagrai Village	9305	19438	2.09

It can be observed from above that project traffic has PCU index 2 to 2.5 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at four toll plaza locations.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

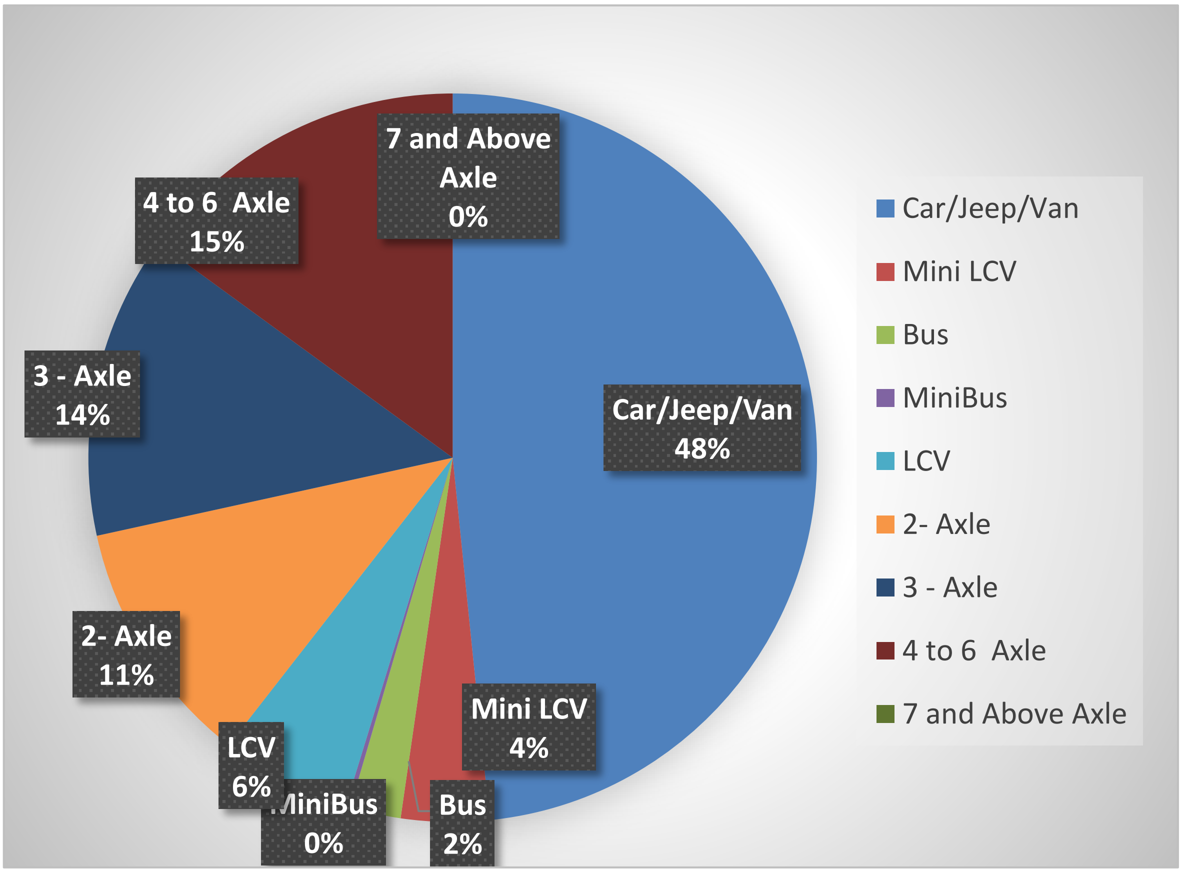

Figure 3-2: Model split of tollable vehicle @ Km 97.900

It is observed that car traffic forms about 48% of total traffic at toll plaza location KM 134.000 while multi axle commercial vehicles are about 38% of total traffic. Truck / Bus and LCV share about 17% and 6% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

Since actual traffic data for bifurcation of journey is not available with Concessionaire, as the project has very recently been awarded, journey type bifurcation is adopted from traffic survey data provided by Concessionaire. For the purpose of calculating revenue all return journeys and monthly passes are converted to single journey type by suitable Daily Pass / Monthly Pass Factors (DPMP factor). The following table shows DPMP factors adopted for each toll plaza on project stretch.

Table 3-6 : Vehicle Type factor at Dagrai Village Toll Plaza KM 97.900

Sr. No	Vehicle Type	DP/MP Factors
		2023-24
1	Car / Jeep / Van	0.750
2	Mini LCV	0.800
3	LCV	0.930
4	Minibus	0.950
5	Bus	0.860
6	Truck - 2 Axle	0.980
7	3 - Axle	0.990
8	4 - 6 Axle	0.980
9	7 & above Axle	0.980

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic patterns and growth on any project corridor. The following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on the project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP

c) Population Growth
d) Per Capita Income growth
e) Industrial Growth
f) Special Industry Potential
g) Regional and National development vision / plan
h) Any other relevant data

3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor. Same is discussed in subsequent chapter.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit networks and more often than not every road is connected to various networks having different origins and destinations. Traffic running on these networks behaves like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Regional Network

Project road has been in existence for a long time and traffic is almost settled. However, there are few upcoming corridors which may have interest in project road catchments. These are discussed below.

Delhi – Mumbai Expressway - The access controlled greenfield expressway connects Delhi and Mumbai (up to Jawaharlal Nehru Port Trust) and passes through states of Haryana, Rajasthan, Madhya Pradesh, Gujarat and Maharashtra. DME alignment will largely cater to traffic between North of India and Gujarat/Western Maharashtra and is not likely to affect traffic on the project road which caters to traffic on NH-44 which is north south highway. Hence it is not likely to impact project road traffic.

Surat – Chennai Expressway - The alignment will largely cater to traffic between states of Gujarat and Central Maharashtra /Andhra Pradesh/ Telangana/Karnataka/Tamilnadu and is not parallel to Project Road. Therefore, it is not likely to affect traffic on the project road.

Pune – **Bangalore Expressway** – Entire catchment of this proposed expressway falls south of project road. It is not likely to affect the project road traffic.

All other major highways in the region exist and traffic is settled in the region. On the local level also, there is no formidable competing route network. Hence it is not envisaged that there will be any major impact on project road traffic in the near future due to regional or local network developments.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future patterns of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for the project corridor of Gwalior-Jhansi from Km 16.000 to Km 98.455 section of NH-44 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable for projects of short durations say 5-10 years, however for long term projections it would be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-12015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different types of vehicles. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on a number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = *k x Log (EI) + A*

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Madhya Pradesh & Uttar Pradesh. Toll plaza at Dagrai Village in the state of Uttar Pradesh. Project traffic has share of majorly states like Madhya Pradesh, Uttar Pradesh, Delhi, Haryana and Rajasthan. For elasticity calculations, working data from these states also has been analysed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Madhya Pradesh State.

Table 5-1 : Per Capita Income Vs Car Madhya Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	38497	424644	4.59	5.63		
2012	41142	493412	4.61	5.69	7%	
2013	42548	555461	4.63	5.74	3%	
2014	44027	637626	4.64	5.80	3%	
2015	47351	820391	4.68	5.91	8%	
2016	52782	869777	4.72	5.94	11%	
2017	54829	982124	4.74	5.99	4%	
2018	57401	1087124	4.76	6.04	5%	5.9%

Regression analysis of same is given in figure below.

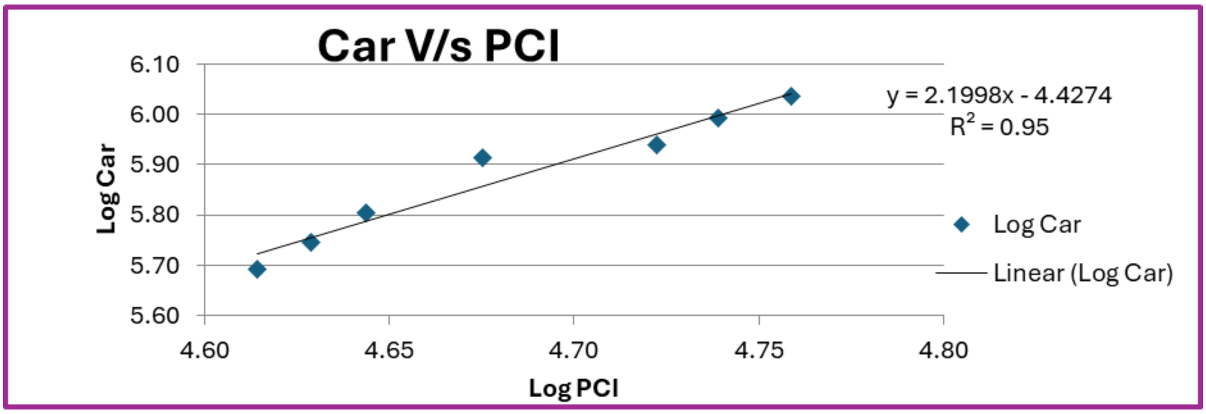

Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Madhya Pradesh

Table 5-2 : Population Vs Bus Madhya Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	72627000	181770	7.86	5.26		
2012	73863000	208530	7.87	5.32	2%	
2013	75099000	233569	7.88	5.37	2%	
2014	76334000	277898	7.88	5.44	2%	
2015	77570000	322227	7.89	5.51	2%	
2016	78806000	347227	7.90	5.54	2%	
2017	79948000	382227	7.90	5.58	1%	
2018	81090000	402227	7.91	5.60	1%	1.6%

Regression analysis of same is given in figure below.

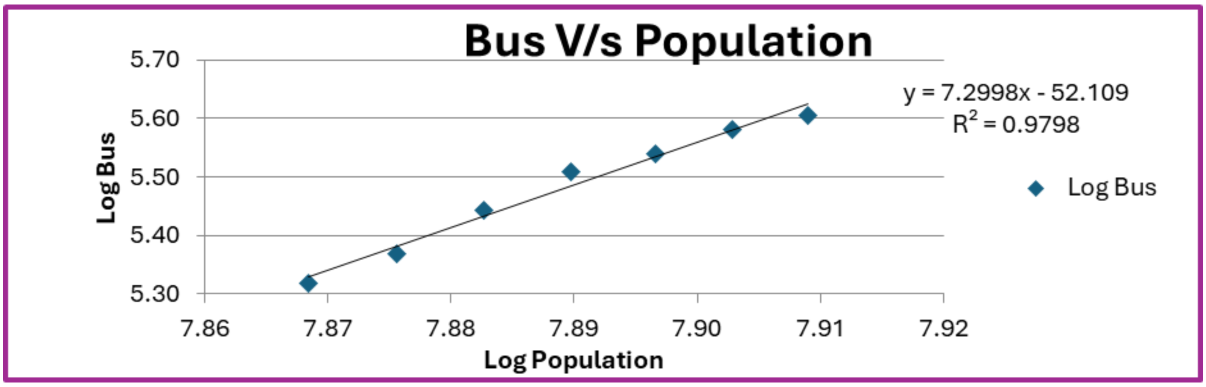

Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Madhya Pradesh

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-3 : LCV Vs NSDP Madhya Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	28237104	121916	7.45	5.09		
2012	30685334	131098	7.49	5.12	9%	
2013	32259760	137815	7.51	5.14	5%	
2014	33924690	150921	7.53	5.18	5%	
2015	37071567	177352	7.57	5.25	9%	
2016	41946525	233553	7.62	5.37	13%	
2017	44200243	289754	7.65	5.46	5%	
2018	46928896	326291	7.67	5.51	6%	7.6%

The following figure depicts regression analysis and extrapolation.

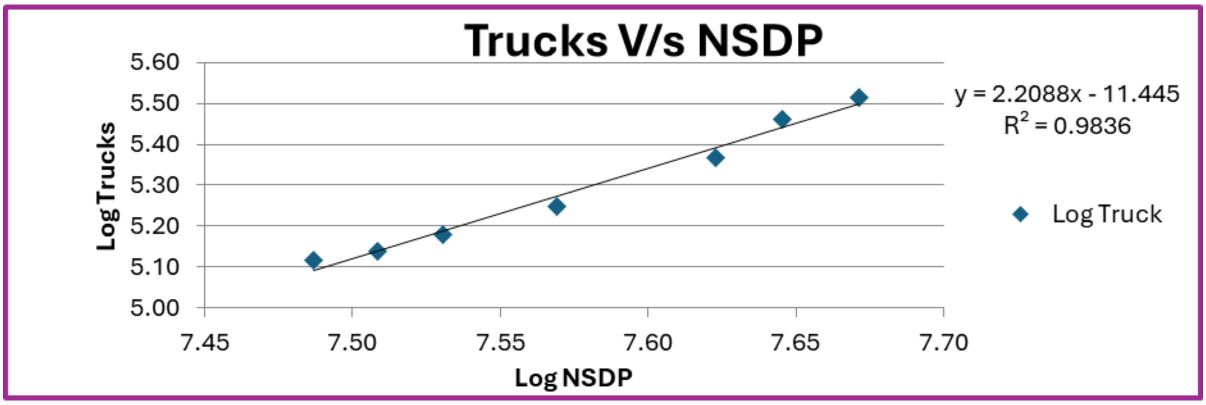

Figure 5-3 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Madhya Pradesh.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-4 : Summary Regression Analysis Madhya Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
MADHYA PRADESH	**Car/Jeep**	PCI	y = 2.2965x - - 4.8829	R^2 = 0.9634	2.3	6%	13.57%	Good Regression
	Bus	Population	y = 7.4978x - - 53.6722	R^2 = 0.9862	7.5	2%	11.90%	Good Regression
	Truck	NSDP	y = 2.2088x - - 11.4451	R^2 = 0.9694	2.2	8%	16.70%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Uttar Pradesh State.

Table 5-5 : Per Capita Income Vs Car Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	32002	1108100	4.51	6.04		
2012	32908	1205374	4.52	6.08	3%	
2013	34044	1423020	4.53	6.15	3%	
2014	34583	1572217	4.54	6.20	2%	
2015	36973	1746117	4.57	6.24	7%	
2016	40847	2027972	4.61	6.31	10%	
2017	41832	2195783	4.62	6.34	2%	
2018	43670	2439845	4.64	6.39	4%	4.6%

Regression analysis of same is given in figure below.

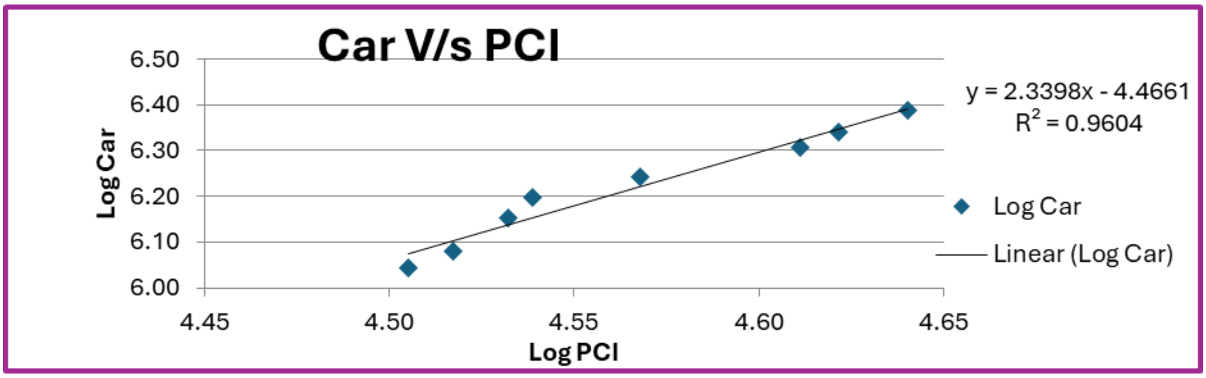

Figure 5-4 : Regression and Elasticity PCI vs. Car – Extrapolation Uttar Pradesh

Table 5-6 : Population Vs Bus Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	199812000	57901	8.30	4.76		
2012	203670000	64147	8.31	4.81	2%	
2013	206322000	74389	8.31	4.87	1%	
2014	209577000	80460	8.32	4.91	2%	
2015	212832000	89127	8.33	4.95	2%	
2016	216870000	112020	8.34	5.05	2%	
2017	219510000	112766	8.34	5.05	1%	
2018	222150000	121975	8.35	5.09	1%	1.5%

Regression analysis of same is given in figure below.

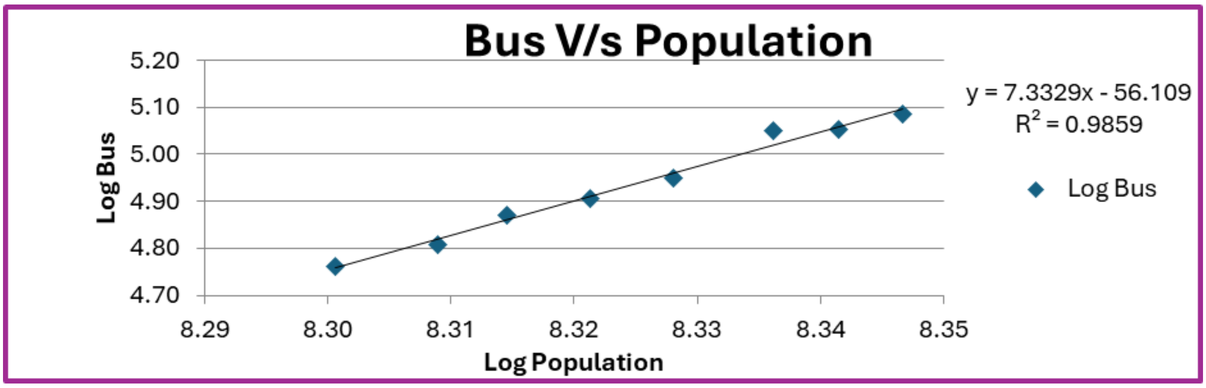

Figure 5-5 : Regression and Elasticity Population vs. Bus – Extrapolation Uttar Pradesh

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-7 Trucks Vs NSDP Uttar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	64513155	162813	7.81	5.21		
2012	67355218	186404	7.83	5.27	4%	
2013	70746910	202761	7.85	5.31	5%	
2014	72968630	217609	7.86	5.34	3%	
2015	79204874	245688	7.90	5.39	9%	
2016	88845325	265167	7.95	5.42	12%	
2017	92380571	307096	7.97	5.49	4%	
2018	97915937	356828	7.99	5.55	6%	6.2%

The following figure depicts regression analysis and extrapolation.

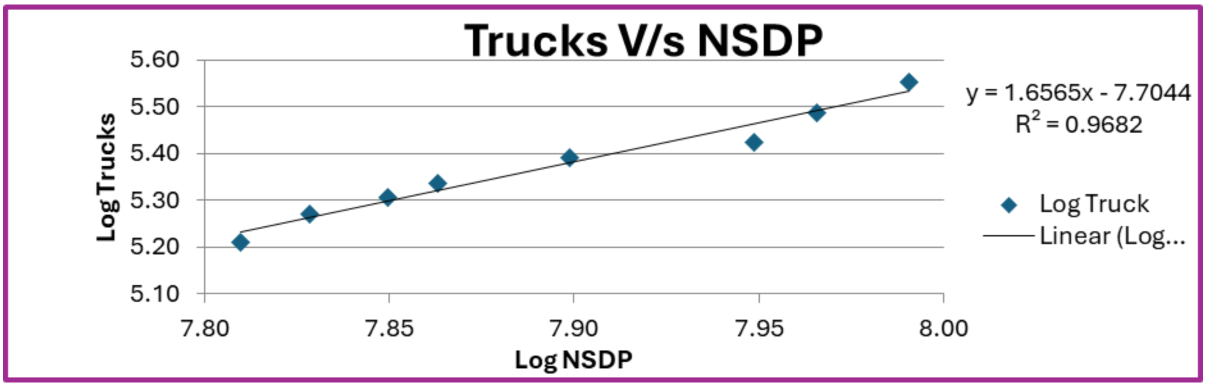

Figure 5-6 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Uttar Pradesh.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-8 : Summary Regression Analysis Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
UTTAR PRADESH	**Car/Jeep**	PCI	y = 2.3398x - - 4.4661	R^2 = 0.9604	2.3398	4.58%	10.72%	Good Regression
	Bus	Population	y = 7.3329x - - 56.1092	R^2 = 0.9859	7.3329	1.53%	11.19%	Good Regression
	Truck	NSDP	y = 1.6565x - - 7.7044	R^2 = 0.9682	1.6565	6.18%	10.24%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Delhi State.

Table 5-9 : Per Capita Income Vs Car Delhi

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	185001	2172069	5.27	6.34		
2012	192220	2416974	5.28	6.38	4%	
2013	200702	2568380	5.30	6.41	4%	
2014	213669	2730071	5.33	6.44	6%	
2015	233115	2986579	5.37	6.48	9%	
2016	244255	3061817	5.39	6.49	5%	
2017	252960	3087309	5.40	6.49	4%	
2018	260967	3249670	5.42	6.51	3%	5.1%

Regression analysis of same is given in figure below.

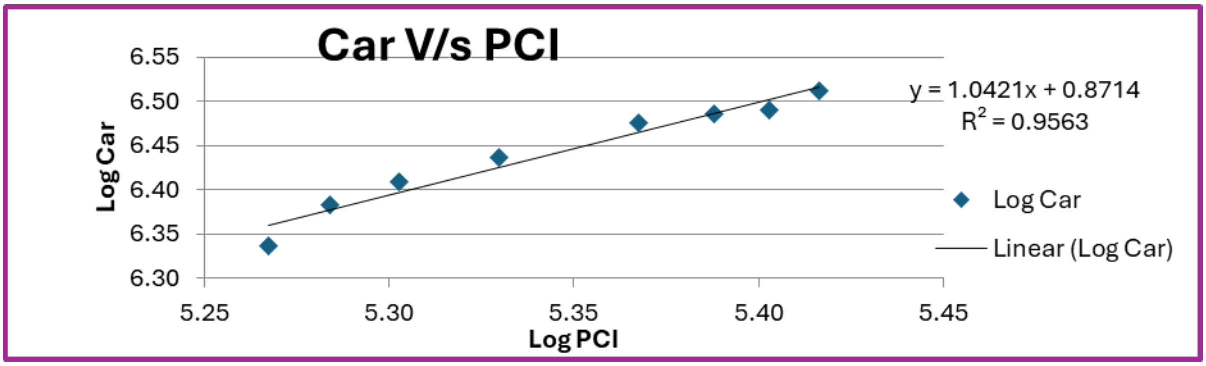

Figure 5-7 : Regression and Elasticity PCI vs. Car – Extrapolation Delhi

Table 5-10 : Population Vs Bus Delhi

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	16788000	20142	7.22	4.30		
2012	17166000	24642	7.23	4.39	2%	
2013	17544000	28142	7.24	4.45	2%	
2014	17921000	33342	7.25	4.52	2%	
2015	18299000	43723	7.26	4.64	2%	
2016	18677000	51823	7.27	4.71	2%	
2017	19056000	61023	7.28	4.79	2%	
2018	19435000	71043	7.29	4.85	2%	2.1%

Regression analysis of same is given in figure below.

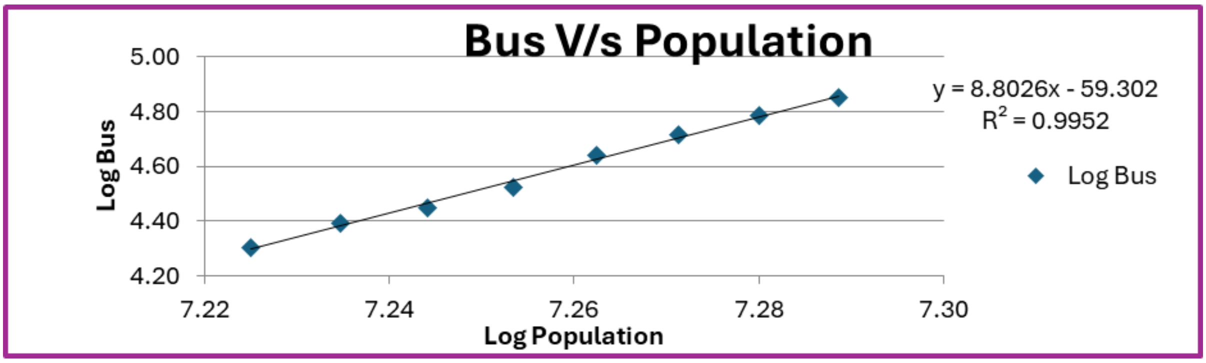

Figure 5-8 : Regression and Elasticity Population vs. Bus – Extrapolation Delhi

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-11 Trucks Vs NSDP Delhi

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	31465002	149277	7.50	5.17		
2012	33419330	157277	7.52	5.20	6%	
2013	35652751	165477	7.55	5.22	7%	
2014	38763874	174577	7.59	5.24	9%	
2015	43172959	185027	7.64	5.27	11%	
2016	46159238	196527	7.66	5.29	7%	
2017	48763115	208417	7.69	5.32	6%	

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2018	51295715	220417	7.71	5.34	5%	7.2%

The following figure depicts regression analysis and extrapolation.

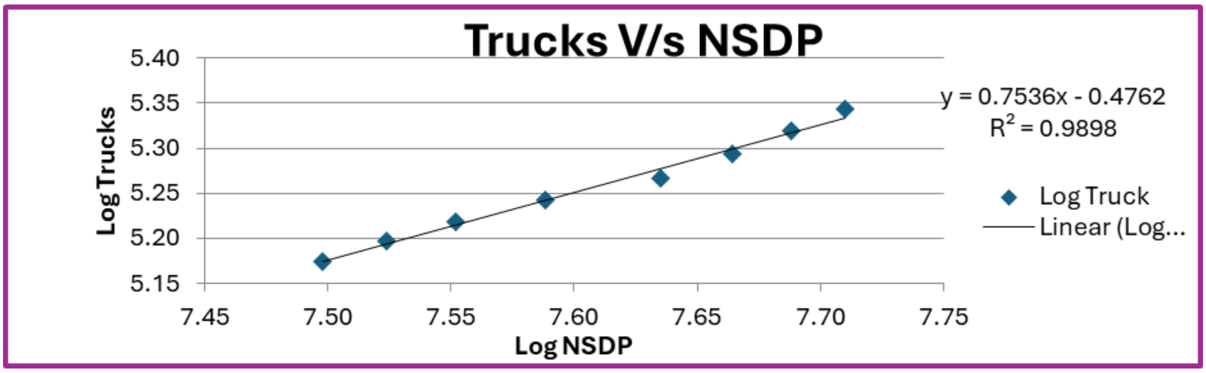

Figure 5-9 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Delhi.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-12 : Summary Regression Analysis Delhi

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
DELHI	**Car/Jeep**	PCI	y = 1.0421x - 0.8714	R^2 = 0.9563	1.0421	5.05%	5.27%	Good Regression
	Bus	Population	y = 8.8026x - - 59.3021	R^2 = 0.9952	8.8026	2.11%	18.61%	Good Regression
	Truck	NSDP	y = 0.7536x - - 0.4762	R^2 = 0.9898	0.7536	7.25%	5.46%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Haryana State.

Table 5-13 : Per Capita Income Vs Car Haryana

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	106085	989519	5.03	6.00		
2012	111780	1602129	5.05	6.20	5%	
2013	119791	1771298	5.08	6.25	7%	
2014	125032	2008748	5.10	6.30	4%	
2015	137833	2260084	5.14	6.35	10%	
2016	150259	2527537	5.18	6.40	9%	
2017	158039	2794957	5.20	6.45	5%	
2018	164976	3011656	5.22	6.48	4%	6.5%

Regression analysis of same is given in figure below.

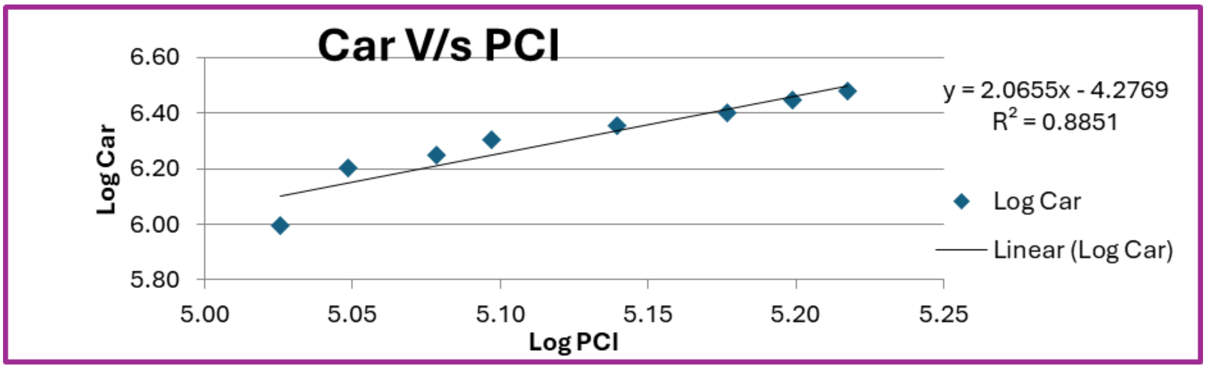

Figure 5-10 : Regression and Elasticity PCI vs. Car – Extrapolation Haryana

Table 5-14 : Population Vs Bus Haryana

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	25351000	39153	7.40	4.59		
2012	25772000	43456	7.41	4.64	2%	
2013	26193000	46558	7.42	4.67	2%	
2014	26614000	52640	7.43	4.72	2%	
2015	27034000	55781	7.43	4.75	2%	
2016	27455000	60129	7.44	4.78	2%	
2017	27861000	64629	7.44	4.81	1%	
2018	28266000	70229	7.45	4.85	1%	1.6%

Regression analysis of same is given in figure below.

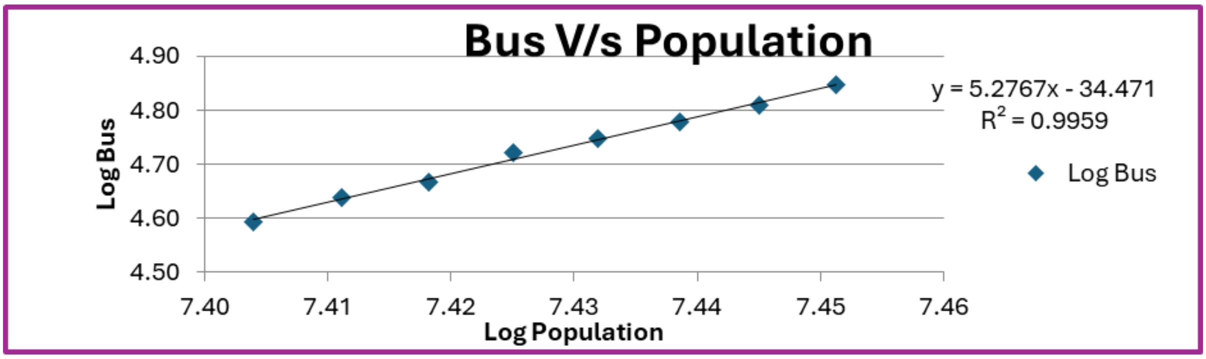

Figure 5-11 : Regression and Elasticity Population vs. Bus – Extrapolation Haryana

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-15 Trucks Vs NSDP Haryana

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	27115248	292735	7.43	5.47		
2012	28975622	307509	7.46	5.49	7%	
2013	31493120	327882	7.50	5.52	9%	
2014	33335925	348732	7.52	5.54	6%	
2015	37270025	367730	7.57	5.57	12%	
2016	41205461	390321	7.61	5.59	11%	
2017	43952345	455321	7.64	5.66	7%	
2018	46533095	550321	7.67	5.74	6%	8.0%

The following figure depicts regression analysis and extrapolation.

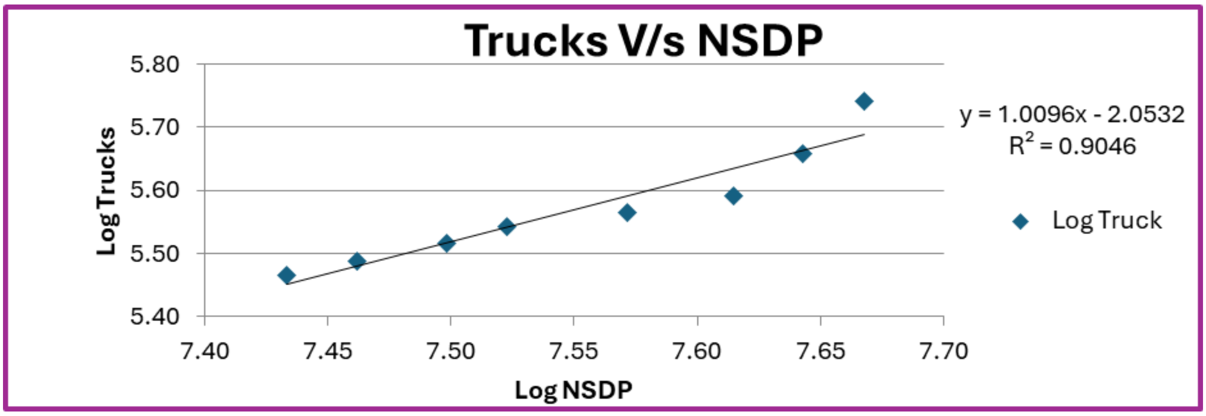

Figure 5-12 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Haryana.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-16 : Summary Regression Analysis Haryana

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
HARYANA	**Car/Jeep**	PCI	y = 2.0655x - - 4.2769	R^2 = 0.8851	2.0655	6.53%	13.49%	Good Regression
	Bus	Population	y = 5.2767x - - 34.4708	R^2 = 0.9959	5.2767	1.57%	8.27%	Good Regression
	Truck	NSDP	y = 1.0096x - - 2.0532	R^2 = 0.9046	1.0096	8.04%	8.12%	Good Regression

The following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-17 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth (8 Year)
2011	57192	591069	4.76	5.77		
2012	58441	659542	4.77	5.82	2%	
2013	61053	733916	4.79	5.87	4%	
2014	64496	814079	4.81	5.91	6%	
2015	68565	899307	4.84	5.95	6%	
2016	71324	988391	4.85	5.99	4%	
2017	73109	1095526	4.86	6.04	3%	
2018	75555	1204005	4.88	6.08	3%	4.1%

Regression analysis of same is given in figure below.

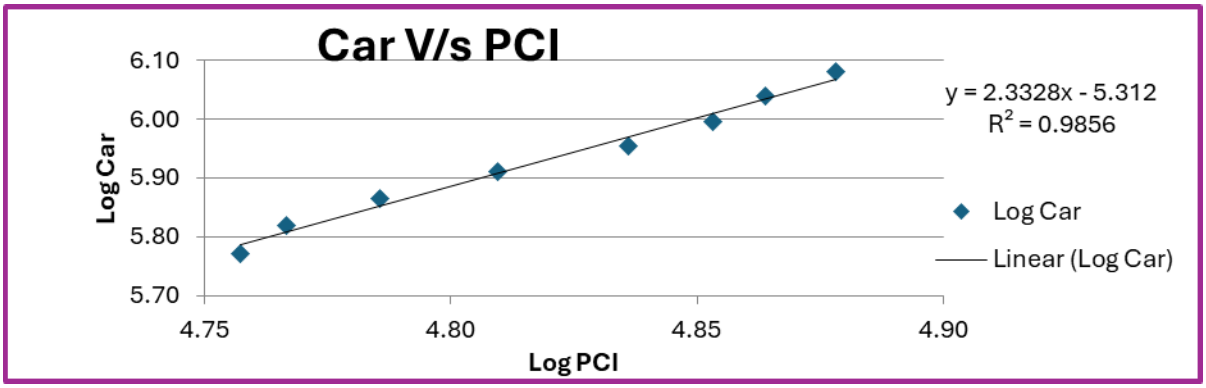

Figure 5-13 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-18 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth (8 Year)
2011	68548000	83345	7.84	4.92		
2012	69687000	88616	7.84	4.95	2%	
2013	70825000	93892	7.85	4.97	2%	
2014	71963000	97650	7.86	4.99	2%	
2015	73102000	102818	7.86	5.01	2%	
2016	74240000	108680	7.87	5.04	2%	
2017	75248000	113964	7.88	5.06	1%	
2018	76256000	118301	7.88	5.07	1%	1.5%

Regression analysis of same is given in figure below.

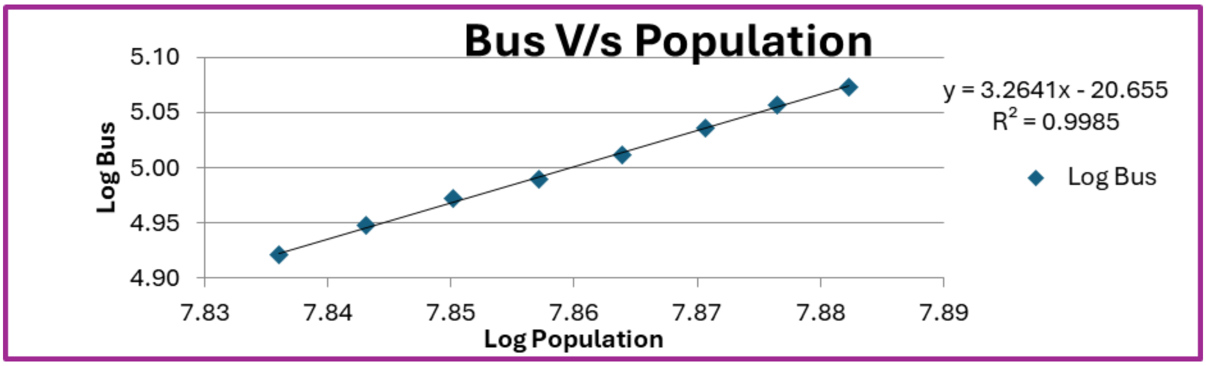

Figure 5-14 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

Elasticity of Trucks has been worked out by regression analysis with NSDP. The following table represents the data and details.

Table 5-19 Trucks Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (8 Year)
2011	39533093	362028	7.60	5.56		
2012	40980249	401983	7.61	5.60	4%	
2013	43429222	434379	7.64	5.64	6%	
2014	46540773	472365	7.67	5.67	7%	
2015	50192151	517604	7.70	5.71	8%	
2016	52965038	561158	7.72	5.75	6%	
2017	55442912	613055	7.74	5.79	5%	
2018	58059438	665926	7.76	5.82	5%	5.7%

The following figure depicts regression analysis and extrapolation.

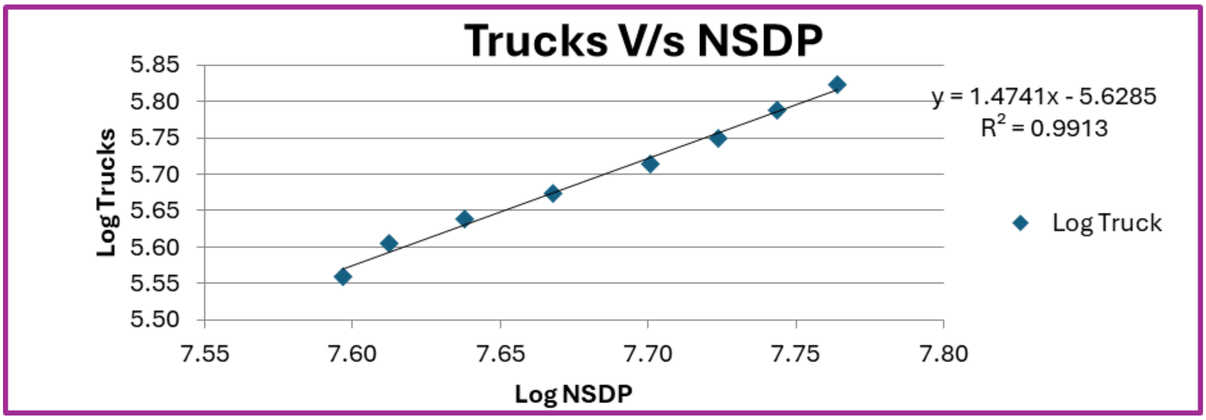

Figure 5-15 : Regression and Elasticity NSDP vs. Trucks Traffic - extrapolation Rajasthan.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. The higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-20 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth (8yrs)	Growth Elastic Model	Remarks
RAJASTHAN	**Car/Jeep**	PCI	y = 2.3328x - - 5.312	R^2 = 0.9856	2.3328	4.07%	9.49%	Good Regression
	Bus	Population	y = 3.2641x - - 20.6548	R^2 = 0.9985	3.2641	1.53%	5.01%	Good Regression
	Truck	NSDP	y = 1.4741x - - 5.6285	R^2 = 0.9913	1.4741	5.65%	8.33%	Good Regression

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Gwalior_ Jhansi has recently been awarded to Concessionaire. Hence credible historical data on project traffic is not available.

5.5 Other Factors Influencing Growth

There are many factors which have an impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

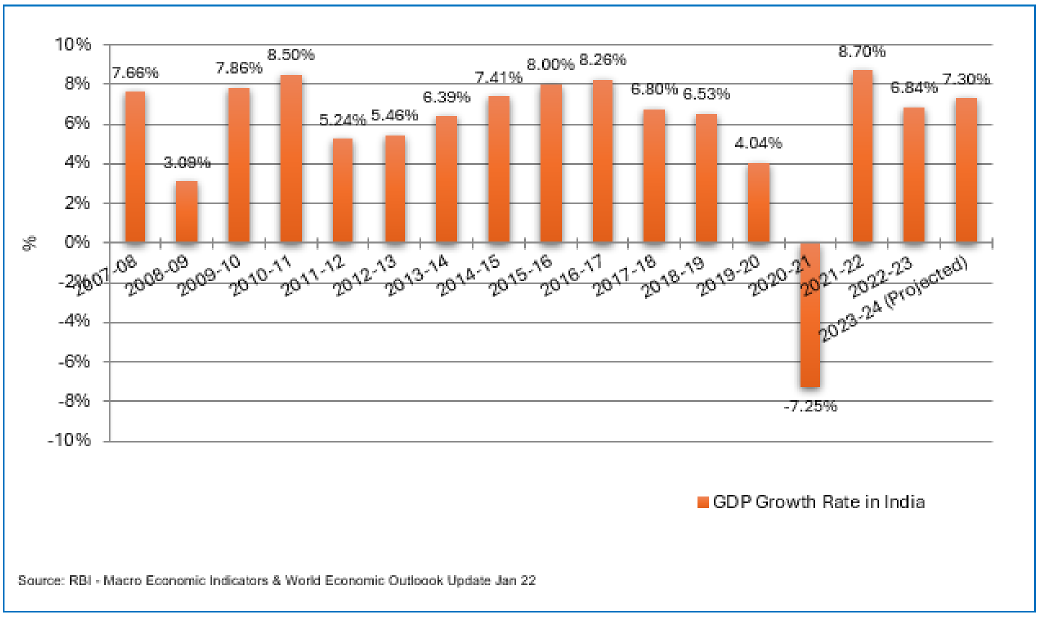

Figure 5-16 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into an opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. Leading banking and financial institutions have estimated that India would keep on registering good growth in coming years and the growth in year 2023-24 is expected to be around 7.3%.

5.6 Developments along and around the Project Corridor & State

MADHYA PRADESH: Madhya Pradesh state, which is located in central India is bound on the north by Uttar Pradesh, on the east by Chhattisgarh, on the south by Maharashtra, and on the west by Gujarat and Rajasthan. It is the second largest Indian state and one of the fastest growing states in the country. At current prices, the Gross State Domestic Product (GSDP) of Madhya Pradesh is estimated at Rs.1,151,049 crore trillion (US$ 150.74 billion) in 2022-23, registering an annual growth of 10% over FY21. Between 2015-16 and 2021-22, The GSDP increased at a CAGR (in Rs.) of 13.09% from 2015-16 to 2021-22. Net State Domestic Product (NSDP) of Madhya Pradesh was about Rs. 8.27 trillion (US$ 113.94 billion) in 2020-21. Between 2015-16 and 2020-21, state's NSDP grew at a CAGR of around 11.22%

GWALIOR DISTRICT: Gwalior district is one of the fifty-two- districts of Madhya Pradesh state. Gwalior is also the administrative headquarters of this district. The population density in the district is 446 people per sq. Km. In the year 2020 the number of live births in the district was 61265 out of which 34162 where male and 27102 were females**.**

INDUSTRIAL PROFILE OF GWALIOR DISTRICT: The economy of the district is basically based on various Industrial sectors. It comprises 3 prominent industrial areas namely Sitholi, Banmore and Malanpur. Earlier the place had two main big manufacturing industries, such as Gwalior Grasim and J.C. Mills of Birlanagar.

DATIA DISTRICT: Datia district is the one of the fifty-two districts in the state of Madhya Pradesh with its admistrative headquarter located at Datia city. According to the census of the district has population of 7,86,754 out of which 420,157, are males and 3,66,597 are females.

The chief agriculture products in the district are all food grains and cotton.

UTTAR PRADESH: The state has an area of 240,928 sq kms and is the most populous state in India, with population of 199.8 million as per 2011 census with an average population density of 828 persons per sq. km. The economy of Uttar Pradesh is the third largest of all the states in India. Nominal GDP of the state for the year 2022-23 is Rs. 21.74 trillion.

It is reported that the economy of Uttar Pradesh is growing at a faster rate than the national economy at about 9%. In terms of traffic and transportation as well Uttar Pradesh is one of the leader states in India now.

- Air Connectivity: Major national & international airports connecting the rest of India, Middle East & South East Asian countries; Only state to have 05 International Airports (03 existing & 02 upcoming at Jewar (G. Noida & Ayodhya)

- Railway Network: Largest railway network in the country spanning over 8,949 km; 05 Railway Zones

- Inland Waterway: India’s 1st Inland Waterway is operational in UP (1100 km Haldia - Varanasi tract

- Expressways: Uttar Pradesh boasts state of art expressways ensuring seamless connectivity; 13 Expressways (existing & upcoming)

- Road Network: Largest Road Network in India; 4 Lakh Km Total Road Length 11,737 Km Total National Highway

Logistics hubs emerging across UP: MMLH Dadri, MMTH Boraki, MMT Varanasi etc.

From the above it can be expected that the project corridor would serve as one of the important transportation links in the area and would contribute to the growth of the region.

JHANSI DISTRICT: Jhansi district is a district of Uttar Pradesh state with its headquarters located at Jhansi city. The district is named Jhansi after the headquarter city Jhansi. According to 2011 census the district has a population of 1998603 out of which 1057436 are males and 941167 are females. To some extent the economy of the district is based on agriculture some of its chief agriculture products are wheat, barley. pea, gram, paddy, groundnut, and different types of pulses. The foremost industries of the district are BHEL Jhansi, Heidelberg cement factory, Baidyanth factory, government cotton mill, Paricha thermal power plant, Indian hume pipe Co.Ltd. its silk material and industries are not only famous in the country but also in the world.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry Favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth has been suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.25% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Stretch

Table 5-21 : Recommended Growth Rates Optimistic

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	7.90%	6.76%	5.15%	4.96%	4.29%
Mini LCV	4.87%	3.09%	2.38%	2.01%	3.22%
Bus	4.97%	3.91%	2.67%	2.45%	2.23%
Mini - Bus	4.97%	3.91%	2.67%	2.45%	2.23%
LCV	4.54%	3.09%	2.38%	2.01%	1.82%
2- Axle	4.87%	3.56%	2.38%	2.01%	1.82%
3 - Axle	4.87%	3.56%	2.38%	2.01%	1.82%
4 to6 Axle	5.53%	4.03%	3.09%	2.60%	2.34%
7 and Above Axle	5.53%	4.03%	3.09%	2.60%	2.34%

Table 5-22 : Recommended Growth Rates Pessimistic

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	7.40%	6.26%	4.65%	4.46%	3.79%
Mini LCV	4.37%	2.59%	1.88%	1.51%	2.72%
Bus	4.47%	3.41%	2.17%	1.95%	1.73%
Mini - Bus	4.47%	3.41%	2.17%	1.95%	1.73%
LCV	4.04%	2.59%	1.88%	1.51%	1.32%
2- Axle	4.37%	3.06%	1.88%	1.51%	1.32%
3 - Axle	4.37%	3.06%	1.88%	1.51%	1.32%
4 to6 Axle	5.03%	3.53%	2.59%	2.10%	1.84%
7 and Above Axle	5.03%	3.53%	2.59%	2.10%	1.84%

Table 5-23 : Recommended Growth Rates Most Likely

Category / Year	FY 25-29	FY 30-34	FY 35-39	FY 40-44	FY 45-49
Car/Jeep/Van	7.65%	6.51%	4.90%	4.71%	4.04%
Mini LCV	4.62%	2.84%	2.13%	1.76%	2.97%
Bus	4.72%	3.66%	2.42%	2.20%	1.98%
Mini - Bus	4.72%	3.66%	2.42%	2.20%	1.98%
LCV	4.29%	2.84%	2.13%	1.76%	1.57%
2- Axle	4.62%	3.31%	2.13%	1.76%	1.57%
3 - Axle	4.62%	3.31%	2.13%	1.76%	1.57%
4 to6 Axle	5.28%	3.78%	2.84%	2.35%	2.09%
7 and Above Axle	5.28%	3.78%	2.84%	2.35%	2.09%

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in the previous section of the report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for the following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza - Chainage 97.900 KM

(Optimistic Growth Scenario)

Year	Car/Jeep/ Van	Mini LCV	Bus	Minibu s	LCV	2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Traffic	PCU (Including Exempted)
2024-25	4858	381	220	20	563	1076	1314	1470	0	9902	20559
2025-26	5242	400	231	21	589	1128	1378	1551	0	10540	21748
2026-27	5656	419	242	22	616	1183	1445	1637	0	11220	23009
2027-28	6103	439	254	23	644	1241	1515	1728	0	11947	24349
2028-29	6585	460	267	24	673	1301	1589	1824	0	12723	25770
2029-30	7030	474	277	25	694	1347	1646	1898	0	13391	26934
2030-31	7505	489	288	26	715	1395	1705	1974	0	14097	28153
2031-32	8012	504	299	27	737	1445	1766	2054	0	14844	29435
2032-33	8553	520	311	28	760	1496	1829	2137	0	15634	30780
2033-34	9131	536	323	29	783	1549	1894	2223	0	16468	32187
2034-35	9601	549	332	30	802	1586	1939	2292	0	17131	33283
2035-36	10096	562	341	31	821	1624	1985	2363	0	17823	34420
2036-37	10616	575	350	32	841	1663	2032	2436	0	18545	35598
2037-38	11163	589	359	33	861	1703	2080	2511	0	19299	36819
2038-39	11738	603	369	34	881	1744	2129	2589	0	20087	38090
2039-40	12320	615	378	35	899	1779	2172	2656	0	20854	39275
2040-41	12931	627	387	36	917	1815	2216	2725	0	21654	40504
2041-42	13572	640	396	37	935	1852	2261	2796	0	22489	41779
2042-43	14245	653	406	38	954	1889	2307	2869	0	23361	43103
2043-44	14951	666	416	39	973	1927	2353	2944	0	24269	44471

Table 6-2 : Total Tollable Traffic @ Toll Plaza - Chainage 97.900 KM (Pessimistic Growth Scenario)

Year	Car/Jeep/ Van	Mini LCV	Bus	Minibus	LCV	2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Traffic	PCU (Including Exempted)
2024-25	4835	379	219	20	561	1071	1308	1463	0	9856	20463
2025-26	5193	396	229	21	584	1118	1365	1537	0	10443	21549
2026-27	5577	413	239	22	608	1167	1425	1614	0	11065	22691
2027-28	5990	431	250	23	633	1218	1487	1695	0	11727	23898
2028-29	6433	450	261	24	659	1271	1552	1780	0	12430	25170
2029-30	6836	462	270	25	676	1310	1599	1843	0	13021	26180
2030-31	7264	474	279	26	693	1350	1648	1908	0	13642	27234
2031-32	7719	486	289	27	711	1391	1698	1975	0	14296	28334
2032-33	8202	499	299	28	729	1434	1750	2045	0	14986	29488
2033-34	8715	512	309	29	748	1478	1804	2117	0	15712	30692
2034-35	9120	522	316	30	762	1506	1838	2172	0	16266	31584
2035-36	9544	532	323	31	776	1534	1873	2228	0	16841	32503
2036-37	9988	542	330	32	791	1563	1908	2286	0	17440	33455
2037-38	10453	552	337	33	806	1592	1944	2345	0	18062	34435
2038-39	10939	562	344	34	821	1622	1981	2406	0	18709	35452
2039-40	11427	571	351	35	833	1647	2011	2457	0	19332	36384
2040-41	11936	580	358	36	846	1672	2041	2509	0	19978	37343
2041-42	12468	589	365	37	859	1697	2072	2562	0	20649	38332
2042-43	13024	598	372	38	872	1723	2103	2616	0	21346	39353
2043-44	13605	607	379	39	885	1749	2135	2671	0	22070	40407

Traffic projections for Most Likely scenario is given as under

Table 6-3 : Total Tollable Traffic @ Toll Plaza - Chainage 97.900 KM (Most Likely Growth Scenario)

Year	Car/Jeep/ Van	Mini LCV	Bus	Minibus	LCV	2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Traffic	PCU (Including Exempted)
2024-25	4846	380	220	20	562	1073	1311	1467	0	9879	20513
2025-26	5217	398	230	21	586	1123	1372	1544	0	10491	21649
2026-27	5616	416	241	22	611	1175	1435	1626	0	11142	22852
2027-28	6046	435	252	23	637	1229	1501	1712	0	11835	24121
2028-29	6509	455	264	24	664	1286	1570	1802	0	12574	25465
2029-30	6933	468	274	25	683	1329	1622	1870	0	13204	26553
2030-31	7384	481	284	26	702	1373	1676	1941	0	13867	27691
2031-32	7865	495	294	27	722	1418	1731	2014	0	14566	28876
2032-33	8377	509	305	28	742	1465	1788	2090	0	15304	30120
2033-34	8922	523	316	29	763	1513	1847	2169	0	16082	31422
2034-35	9359	534	324	30	779	1545	1886	2231	0	16688	32411
2035-36	9818	545	332	31	796	1578	1926	2294	0	17320	33435

Year	Car/Jeep/ Van	Mini LCV	Bus	Minibu s	LCV	2- Axle	3 - Axle	4 to 6 Axle	7 and Above Axle	Total Traffic	PCU (Including Exempted)
2036-37	10299	557	340	32	813	1612	1967	2359	0	17979	34496
2037-38	10804	569	348	33	830	1646	2009	2426	0	18665	35594
2038-39	11334	581	356	34	848	1681	2052	2495	0	19381	36733
2039-40	11868	591	364	35	863	1711	2088	2554	0	20074	37788
2040-41	12427	601	372	36	878	1741	2125	2614	0	20794	38876
2041-42	13012	612	380	37	893	1772	2162	2675	0	21543	39999
2042-43	13625	623	388	38	909	1803	2200	2738	0	22324	41163
2043-44	14266	634	397	39	925	1835	2239	2802	0	23137	42368

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued at fee at 2/3rd rate for 50 single journey trips.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
   a) Local Car Jeep Van - Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza)

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A} - \text{WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2022-23. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

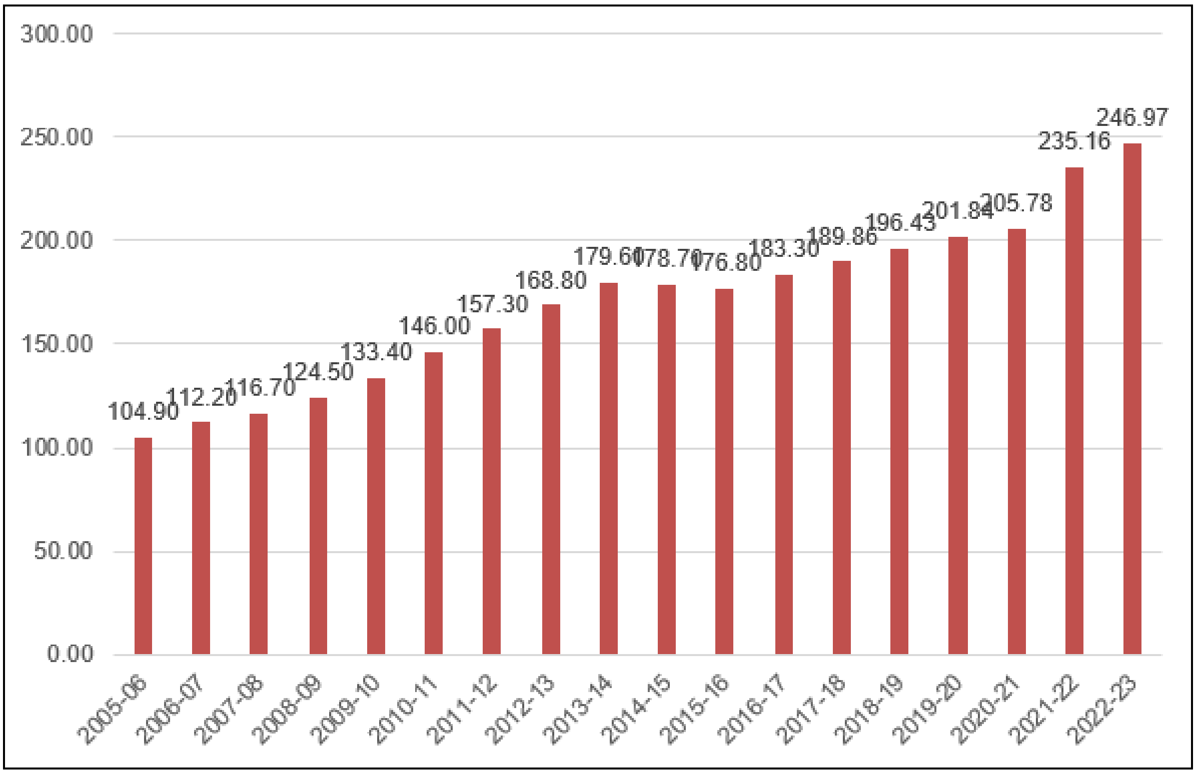

Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in the last few years is steadily growing. It grew by the range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Oversized Vehicles (7 or more Axles)	4.20

These rates are then modified for as per procedure provided in guidelines of notification considering factors listed below.

- Annual revision of fee rate - @3%
- Application of WPI

Base rates have been worked out to map the current rates. These shall be updated when more details come in. Base toll rates are given below.

Table 7-2 : Toll Rates for Year 2023-24 (Rs. Rupees) @ Toll Plaza 1 – KM 97.900

Sr.no	Type of Vehicle	Rates (2023-24)
1	Car / Jeep / Van	140.00
2	Mini LCV	140.00
3	Bus	475.00
4	Minibus	225.00
5	LCV	225.00
6	Truck - 2 Axle	475.00
7	3 - Axle	515.00
8	4 - 6 Axle	745.00
9	7 & above Axle	905.00

Above rates are applicable for base year 2023-24. These rates have been escalated for future. year as NHAI policy and MORTH guideline for future revenue working

Table 7-3 : Toll Rates for Forecasting Year (Rs. Rupees) @ Toll Plaza 1 – KM 97.900

Year	Car/Jeep/Van	Mini LCV	Bus	Minibus	LCV	2-Axle	3 - Axle	4 to 6 Axle	7 and Above Axle
2024-25	145	145	485	230	230	485	530	760	925
2025-26	150	150	510	245	245	510	555	800	975
2026-27	160	160	535	255	255	535	585	840	1025
2027-28	165	165	565	270	270	565	615	885	1075
2028-29	175	175	590	280	280	590	645	930	1130
2029-30	185	185	620	295	295	620	680	975	1190
2030-31	195	195	655	310	310	655	715	1025	1250

Year	Car/Jeep/Van	Mini LCV	Bus	Minibus	LCV	2-Axle	3 - Axle	4 to 6 Axle	7 and Above Axle
2031-32	205	205	690	330	330	690	750	1080	1315
2032-33	215	215	725	345	345	725	790	1135	1380
2033-34	225	225	760	365	365	760	830	1195	1455
2034-35	235	235	800	380	380	800	875	1255	1530
2035-36	250	250	845	400	400	845	920	1320	1610
2036-37	260	260	890	425	425	890	970	1390	1695
2037-38	275	275	935	445	445	935	1020	1465	1785
2038-39	290	290	985	470	470	985	1075	1545	1880
2039-40	305	305	1035	495	495	1035	1130	1625	1980
2040-41	325	325	1095	520	520	1095	1190	1715	2085
2041-42	340	340	1150	550	550	1150	1255	1805	2200
2042-43	360	360	1215	580	580	1215	1325	1905	2315
2043-44	380	380	1280	610	610	1280	1395	2005	2445

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2043-44 years starting from the year 2023-24 are shown in tables below.

Table 7-4 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Location / Year	TP-01	Total
2024-25	112.54	112.54
2025-26	124.58	124.58
2026-27	138.62	138.62
2027-28	154.10	154.10
2028-29	170.56	170.56
2029-30	187.19	187.19
2030-31	205.60	205.60
2031-32	226.42	226.42
2032-33	247.59	247.59
2033-34	271.37	271.37
2034-35	294.09	294.09
2035-36	321.24	321.24

Location / Year	TP-01	Total
2036-37	347.47	347.47
2037-38	377.90	377.90
2038-39	411.41	411.41
2039-40	446.34	446.34
2040-41	484.54	484.54
2041-42	524.22	524.22
2042-43	570.18	570.18
2043-44	620.12	620.12

Table 7-5 : Toll Revenue Pessimistic Scenario (Rs. Crores)

Location / Year	TP-01	Total
2024-25	112.01	112.01
2025-26	123.45	123.45
2026-27	136.71	136.71
2027-28	151.24	151.24
2028-29	166.58	166.58
2029-30	181.93	181.93
2030-31	198.86	198.86
2031-32	217.91	217.91
2032-33	237.16	237.16
2033-34	258.73	258.73
2034-35	279.03	279.03
2035-36	303.30	303.30
2036-37	326.49	326.49
2037-38	353.37	353.37
2038-39	382.84	382.84
2039-40	413.40	413.40
2040-41	446.63	446.63
2041-42	480.86	480.86
2042-43	520.45	520.45
2043-44	563.30	563.30

Table 7-6 : Toll Revenue Most Likely Scenario (Rs. Crores)

Location / Year	TP-01	Total
2024-25	112.29	112.29
2025-26	124.02	124.02
2026-27	137.68	137.68

Location / Year	TP-01	Total
2027-28	152.66	152.66
2028-29	168.54	168.54
2029-30	184.53	184.53
2030-31	202.22	202.22
2031-32	222.10	222.10
2032-33	242.26	242.26
2033-34	264.89	264.89
2034-35	286.35	286.35
2035-36	312.01	312.01
2036-37	336.68	336.68
2037-38	365.28	365.28
2038-39	396.69	396.69
2039-40	429.38	429.38
2040-41	465.00	465.00
2041-42	501.79	501.79
2042-43	544.40	544.40
2043-44	590.67	590.67

7.6 Modification in Concession Period

Modification of the concession period shall be done on the basis of Revenue targets given in the contract for milestones 1 & 2.

Modification in concession period as per provisions of DCA and same is summarized in table for all scenarios.

Pessimistic Case

Target Point 1- March 2033

Target Month - March 2031	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period (Year)	Change in Concession period (Year)	Modified Concession Period
TOT-13 - Gwalior to Jhansi	17	19.00	11.74 %	No	-	0.00%	20.00	0.00	

Target Point 2- March 2038

Target Month - March 2038	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period (Year)	Change in Concession period	Total Change in Concession period (Year)	Calculated Modified Concession Period	Final Concession Period subject to Cap
TOT-13 - Gwalior to Jhansi	31	30.73	- 0.88 %	No	-	0.00%	20.00	0.00	0.00	20.00	

Most likely Case

Target Point 1- March 2033

Target Month - March 2031	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period (Year)	Change in Concession period (Year)	Modified Concession Period
TOT-13 - Gwalior to	17	19.39	14.04 %	No	-	0.00%	20.00	0.00	

Jhansi									

Target Point 2- March 2038											
Target Month - March 2038	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period (Year)	Change in Concession period	Total Change in Concession period (Year)	Calculated Modified Concession Period	Final Concession period subject to Cap
TOT-13 - Gwalior to Jhansi	31	31.81	2.60 %	No	-	0.00%	20.00	0.00	0.00	20.00	

Optimistic Case

Target Point 1- March 2033									
Target Month - March 2031	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period (Year)	Change in Concession period (Year)	Modified Concession Period
TOT-13 - Gwalior to Jhansi	17	19.79	16.42 %	No	-	0.00%	20.00	0.00	

Target Point 2- March 2038											
Target Month - March 2038	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period (Year)	Change in Concession period	Total Change in Concession period (Year)	Calculated Modified Concession Period	Final Concession period subject to Cap
TOT-13 - Gwalior to Jhansi	31	32.95	6.29 %	No	-	0.00%	20.00	0.00	0.00	20.00	

TOT-13 (Gwalior to Jhansi)-Modification in Concession Period						
Types of Scenarios	**Pessimistic Case**		**Most likely Case**		**Optimistic Case**	
Target Month	**Mar-31**	**Mar-38**	**Mar-31**	**Mar-38**	**Mar-31**	**Mar-38**
Target Revenue (Rs. Crores)	17	31	17	31	17	31
Calculated Revenue (Rs. Crores)	19.00	30.73	19.39	31.81	19.79	32.95
Differences %	11.74%	-0.88%	14.04%	2.60%	16.42%	6.29%
If qualifies for Modification in Concession Period	No	No	No	No	No	No
Qualifying Increment or shortfall	-	-	-	-	-	-
Change in Concession period %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Original Concession Period	20.00	20.00	20.00	20.00	20.00	20.00
Change in Concession period	0.00	0.00	0.00	0.00	0.00	0.00
Total Change in Concession period	0.00		0.00		0.00	
Calculated Modified Concession Period	20.00		20.00		20.00	
Final Concession Period subject to Cap	0.00		0.00		0.00	

Thus, there is no modification expected in concession period due to variation in revenue as per above estimates in all scenarios.

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Gwalior-Jhansi from Km 16.000 to Km 98.455 section of NH-44 in state of Madhya Pradesh and Uttar Pradesh is currently four lane road. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the important regional network connecting Uttar Pradesh, Madhya Pradesh to Southern States and vice-versa. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As discussed, dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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A-834

KAITHAL TO RAJASTHAN SECTION OF NH 152/65 (KM 33.250 TO KM 241.580) IN THE STATE OF HARYANA

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

MARCH 2024

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A-835

KAITHAL TO RAJASTHAN SECTION OF NH-152/65

(KM 33.250 TO 241.580)

IN THE STATE OF HARYANA

TRAFFIC STUDY & REVENUE
PROJECTION REPORT
(FINAL)

MARCH 2024

GMD CONSULTANTS
NAVI MUMBAI

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under various NHDP Phases.

The project under consideration, Four Laning of **Kaithal** to **Rajasthan** section of NH-152/65 from km 33.250 to km 241.580 in the state of Haryana is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s Kaithal Tollway Ltd*. (Concessionaire) has been awarded the Project for a concession period of 27 years starting from appointed date of 15th July 2015. COD was achieved for part length of project in September 2017 and Tolling Operation on Project started. Final COD for full length was achieved on 29th March-2019

Project road section from Kaithal to Rajasthan border is part of important corridor which connects part of Haryana, Punjab, Himachal Pradesh, J&K and certain part of Uttarakhand to Rajasthan, Gujarat and Costal parts of Maharashtra and then to down to south.

Project road section form Kaithal to Rajasthan border passes through three districts of Haryana namely Kaithal, Hisar and Bhiwani. Project road also passes through important towns and development areas of Narwana, Hisar and Siwani in addition to Kaithal.

Following figure shows the project road alignment.

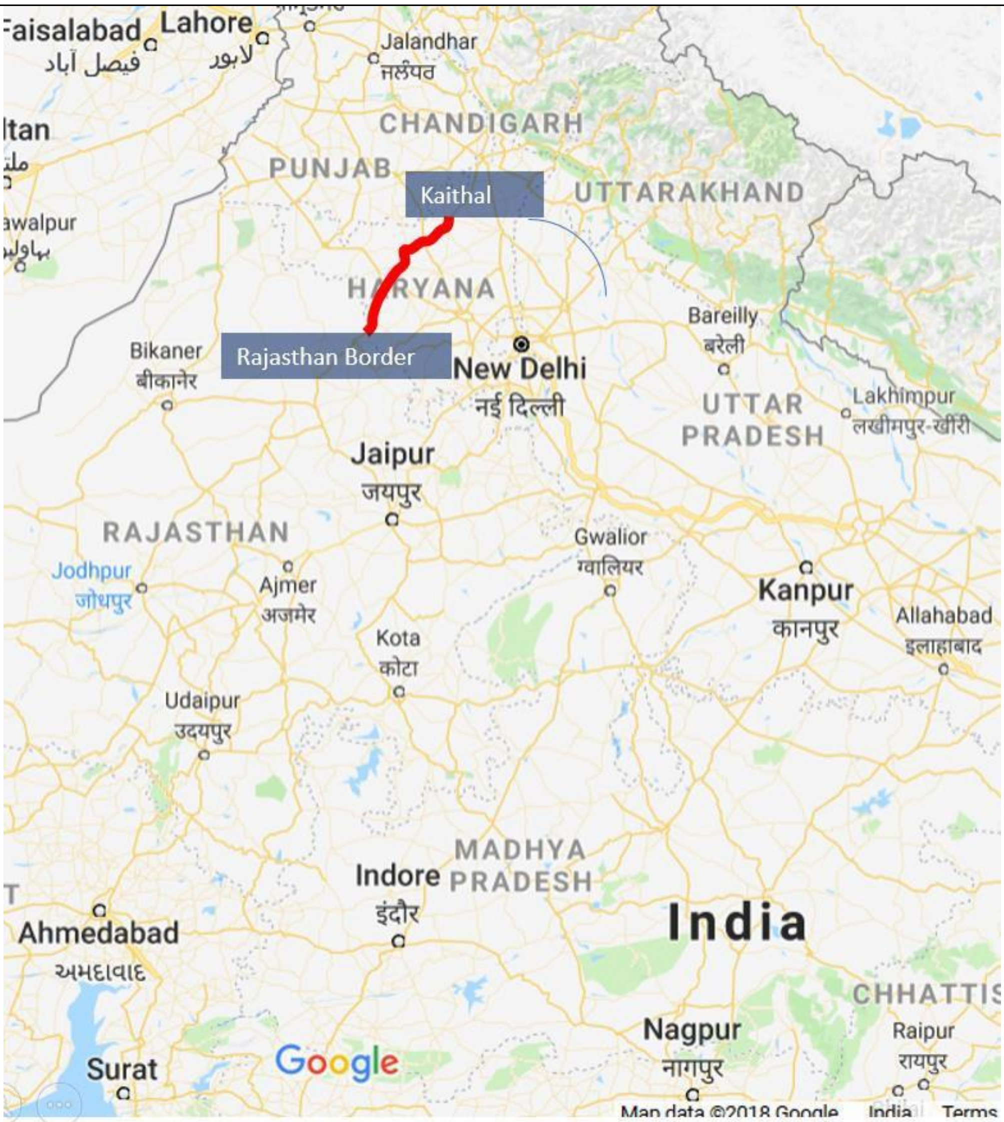

Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved. This report named as **"Traffic Study & *Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows.

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

The project road forms part of important connectivity between Northern states like Haryana,Punjab,Himachal Pradesh,J&K and states like Maharashtra,Gujarat (Kandla and Mundra),and parts of Rajasthan. It is the shortest route between Punjab / J&K, Gujarat, Rajasthan, Maharashtra, Goa, Kerala and becomes good alternate route to NH-1 and NH-8 for Gujarat, Rajasthan, Maharashtra Goa and Kerala bound traffic from Haryana, Punjab, J&K Himachal Pradesh.

Project road also caters to local intrastate traffic between districts of Ambala, Chandigarh, Kaithal, Jind, Hisar, Bhiwani in Haryana and Churu, Sikar, Nagaur and Jodhpur in Rajasthan.

2.2 Project Stretch Description

The Project highway from Kaithal to Rajasthan border from Km 33.250 to km 241.580 has been widened to four lanes as per schedules. The project has following bypasses which are part of project road.

Table 2-1 : Bypass Details

<table>
<tr><th>Sr. No</th><th>Bypass Name</th><th>Length</th><th>Toll Plaza</th></tr>
<tr><td>1</td><td>Kalyat</td><td>3.450</td><td rowspan="3">125.790</td></tr>
<tr><td>2</td><td>Dhanaudha</td><td>3.800</td></tr>
<tr><td>3</td><td>Narwana</td><td>1.900</td></tr>
<tr><td>4</td><td>Barwala</td><td>7.850</td><td rowspan="2">171.580</td></tr>
<tr><td>5</td><td>Hisar+Talwandi Rana</td><td></td></tr>
<tr><td>6</td><td>Barwa</td><td>3.300</td><td rowspan="2">212.400</td></tr>
<tr><td>7</td><td>Siwani</td><td>6.150</td></tr>
</table>

Full COD for project is achived on 29th March 2019.

Project road forms part of very important transportation corridor which connects Northern states like Haryana, Punjab, J&K, Himachal etc to Southern states and development centres especially on west coastline of India. In previous years project road from Ambala to onwards was in bad shape. There were large number of congestion points along the route in form of narrow roads inside towns, level crossings and bad riding quality. Project road from Kaithal to Rajasthan Border is almost complete which has taken up bypasses and ROBs. Also, the road from Ambala to Kaithal is under four laning construction as of now. The project is awarded to M/s Sadbhav Engineering Limited and is expected to complete in current year. This would improve the flow of traffic on project corridor to great extent.

Following figure show project alignment and toll plaza locations.

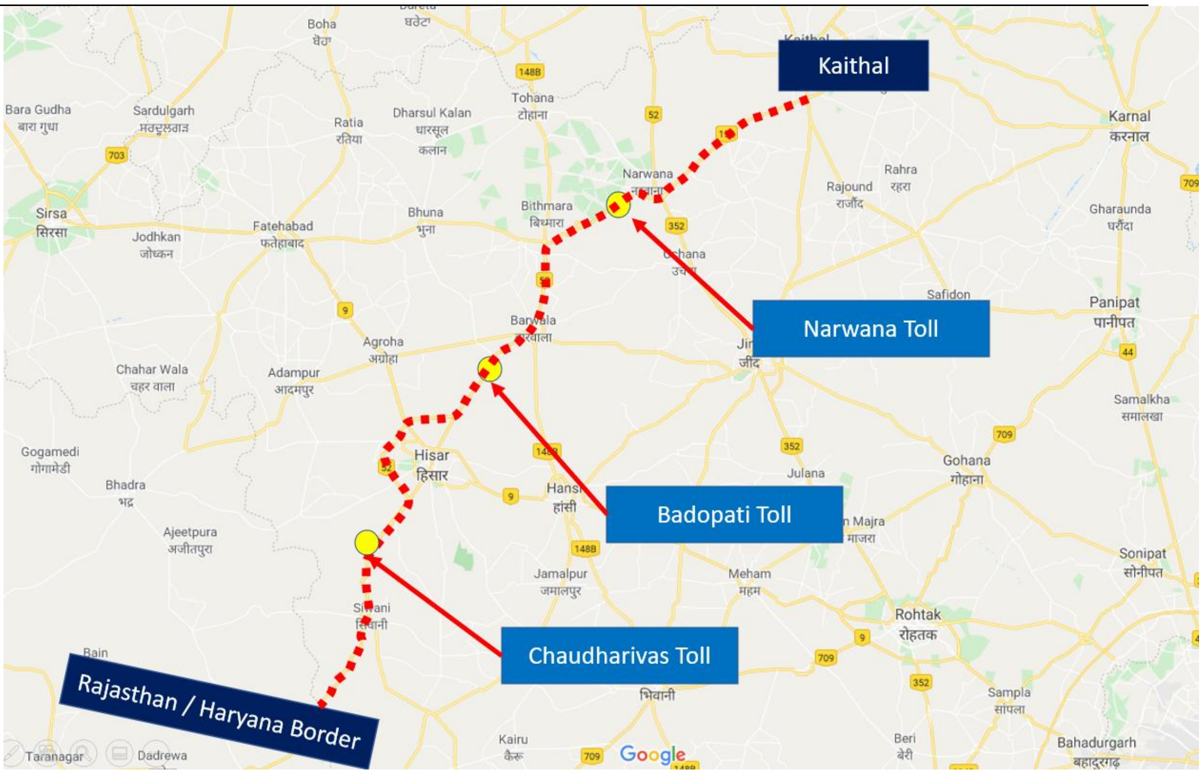

Figure 2-1 : Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is complete. Following photographs illustrate project section along the corridor.

Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from client for project.

- Classified traffic volume counts at three toll plaza locations on Kaithal- Rajasthan Border section of NH-152/65 for year 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22,2022-23 and traffic data from April 2023 to November 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project.
- Establish base year traffic.
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 125 Toll Plaza at Narwana	AADT for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
		2023	November 2023	from April 2023 to November 2023	November 2023	2023
2	Km 171 Toll Plaza at Badopatti	AADT for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023
3	Km 212 Toll Plaza at Chaudhariwas	AADT for Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023	For Year 2018-19, 2019-2020, 2020-21, 2021-22, 2022-2023 & Eight month from April 2023 to November 2023

3.2 Classified traffic volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since project highway is currently under toll operation, the data collected is corresponding to category of tollable vehicles. Following is the type of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Truck / Bus
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for year 2019-20 ,2020-21, 2021-22, 2022-23 and from April 2023 to November 2023.

Since the traffic data available for this update is for only eight months, from April 2023 to November 2023, it may not represent the whole year traffic. Hence a seasonality factor for balance part of year has been applied to average traffic of current eight months to arrive at Annual Average Daily Traffic of base year 2023-24. Same corrected traffic is used for future projections and revenue calculations. Following table shows historical traffic on project stretch and Annual Average Daily Traffic (AADT) for year 2023-24.

Table 3-3 : Traffic Data at Narwana Toll Plaza at Km 125

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	2952	2657	4351	4094	4282
2	Minibus/LCV	633	569	381	325	367
3	Bus	310	279	315	289	338
4	Truck	320	287	529	462	477
5	3-Axle	314	283	416	345	321
6	Multi Axle	771	694	1347	1343	1382
7	Oversized Vehicles	5	5	20	47	48
	Total	**5305**	**4774**	**7357**	**6905**	**7215**

Table 3-4 : Traffic Data at Badopatti Toll Plaza at Km 171

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	5387	4850	4915	4591	4132
2	Minibus/LCV	630	567	374	331	306
3	Bus	431	387	395	384	405

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
4	Truck	327	295	577	503	437
5	3-Axle	376	339	505	400	336
6	Multi Axle	923	831	1522	1326	1130
7	Oversized Vehicles	3	3	16	46	55
	Total	**8077**	**7272**	**8303**	**7581**	**6800**

Table 3-5 : Traffic Data at Chaudhariwas Toll Plaza at Km 212

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23	Annual Average Daily Traffic (Nos.)- 2023-24
1	Car	2947	2652	4371	4076	4167
2	Minibus/LCV	592	532	335	335	356
3	Bus	162	147	181	159	164
4	Truck	367	331	629	522	497
5	3-Axle	470	423	630	537	452
6	Multi Axle	1395	1257	2121	1812	1656
7	Oversized Vehicles	6	5	29	65	65
	Total	**5939**	**5347**	**8295**	**7506**	**7356**

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called

Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in “IRC-64-1990: Guidelines for Capacity of Roads in Rural areas”. The adopted passenger car unit values (PCU) are presented in ***Table 3-6.***

Table 3-6 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-7 : Traffic in PCU at Project Stretch Base Year 2023-24

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-20	Narwana Km 125.79	5305	10226	1.93
	Badopatti Km 171.58	8077	13901	1.72
	Chaudhariwas Km 212.400	5939	13136	2.21
2020-21	Narwana Km 125.79	4774	9203	1.93
	Badopatti Km 171.58	7272	12516	1.72
	Chaudhariwas Km 212.400	5347	11832	2.21
2021-22	Narwana Km 125.79	7357	14849	2.02

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
	Badopatti Km 171.58	8303	16824	2.03
	Chaudhariwas Km 212.400	8295	18866	2.27
2022-23	Narwana Km 125.79	6905	14124	2.05
	Badopatti Km 171.58	7581	15122	1.99
	Chaudhariwas Km 212.400	7506	16679	2.22
2023-24	Narwana Km 125.79	7215	14676	2.03
	Badopatti Km 171.58	6800	13455	1.98
	Chaudhariwas Km 212.400	7356	15782	2.15

It can be observed from above that project traffic has PCU index ranging from 2.0 to 2.3 which is an indicator of good proportion of commercial traffic in traffic mix in project corridor. Following figure illustrates variation of PCU index at three toll plaza locations.

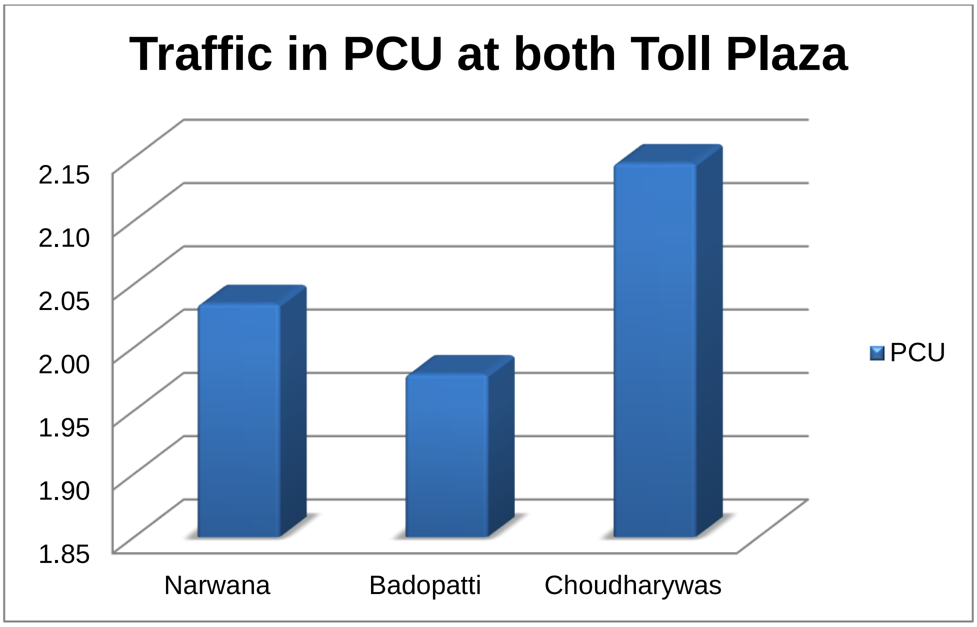

Figure 3-1 : Comparison of PCU Index

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

It is observed that car traffic forms about 50%- 60% of total traffic at toll plaza locations while multi axle commercial vehicles are about 20% -35% of total traffic. Truck / Bus and LCV share about 12% and 5 % of traffic volume respectively.

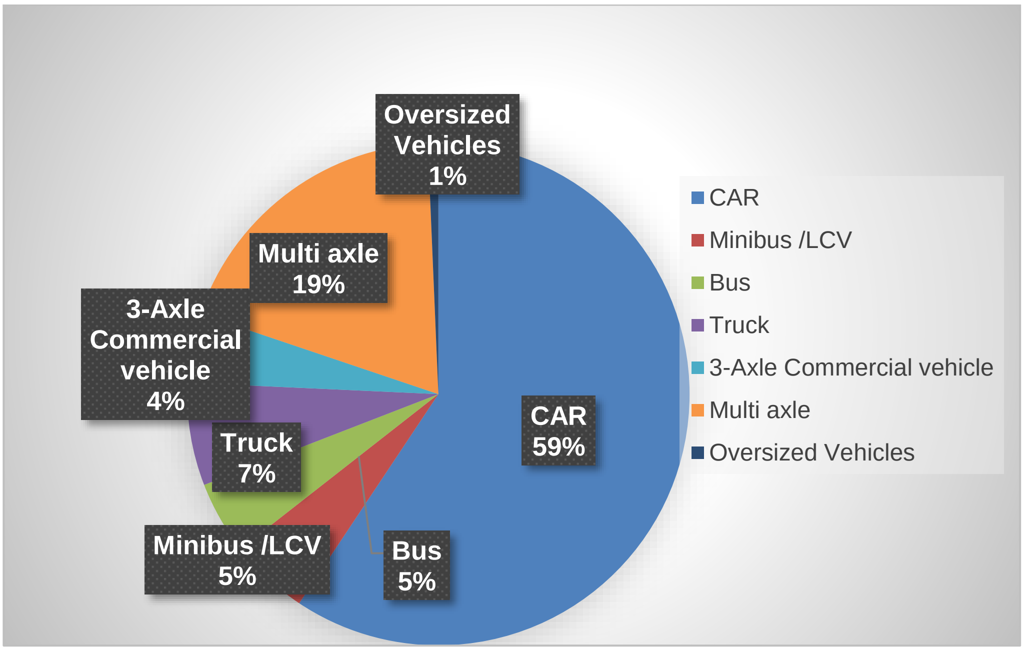

Figure 3-2 :Model Split of Tollable Vehicle-Km 125.790

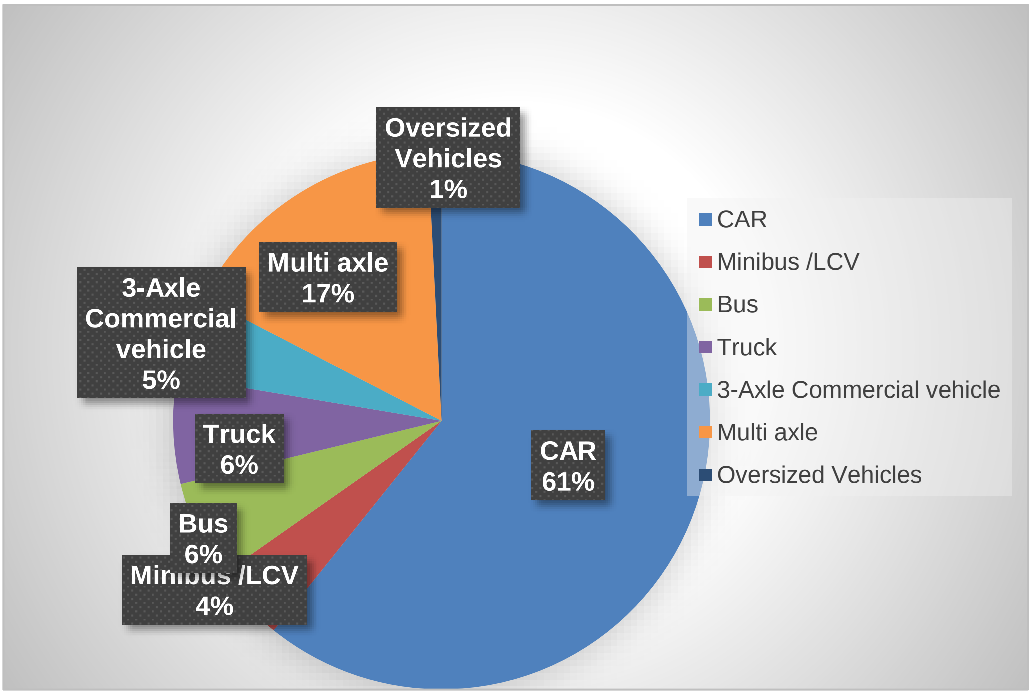

Figure 3-3 :Model Split of Tollable Vehicle-Km 171.58

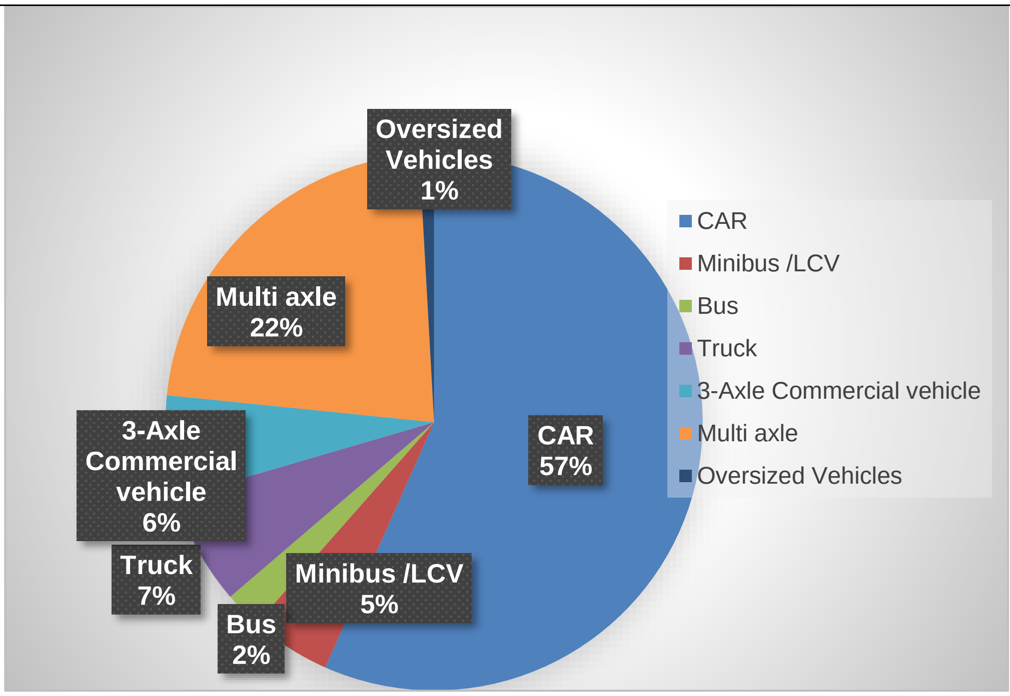

Figure 3-4 :Model Split of Tollable Vehicle-Km 212.400

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2023-24

Table 3-8 : Journey Type Bifurcation of Traffic at Narwana TP-1 KM 125

Sr. No	Type	Traffic Volume (Nos.) 2023-24
1	Single Journey	4076
2	Return Journey	3047
3	Local Commercial Single Journey	65
4	Monthly Pass Local	26
5	Monthly Pass	0

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is a high as 57%. Return journey component is 42%. The number of monthly pass local is 0% and local commercial single Journey also 1% at Narwana toll plaza.

Following tables give the detail of journey distribution at Badopatti and Chaudhariwas toll plaza.

Table 3-9 : Journey Type Bifurcation of Traffic at Badopatti TP KM 171

Sr. No	Type	Traffic Volume (Nos.) 2023-24
1	Single Journey	3696
2	Return Journey	2812
3	Local Commercial Single Journey	184
4	Monthly Pass Local	109
5	Monthly Pass	0

Table 3-10 : Journey Type Bifurcation of Traffic at Chaudhariwas TP KM 212

Sr. No	Type	Traffic Volume (Nos.)2023-24
1	Single Journey	4392
2	Return Journey	2825
3	Local Commercial Single Journey	103
4	Monthly Pass Local	37
5	Monthly Pass	0

Monthly local pass is very high in proportion at Badopatti toll plaza. At Other toll plazas single journey is dominating pattern of trip.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic pattern and growth on any project corridor. Following is some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit network and more often than not every road is connected to various networks having different origin and destinations. Traffic running on these networks behave like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Though project road has started collecting toll form mid of year 2017-18 but it was for partial completion of project stretch. Some critical location bypasses and ROBs were pending at beginning of toll. Also stretch from Ambala to Kaithal which is just before project stretch is under four laning. In this case project traffic can be considered as under settlement. Shifting of traffic depends on factors such as road length, type, geometry, riding quality and capacity. Competing road analysis was done at two levels. First at regional level and second at local level. Project road forms an optimal route for the traffic between following zones.

Zone-1- J & K, Punjab (Ludhiana, Amritsar parts), Haryana, Himachal, Part of Uttarakhand
Zone-2 – Rajasthan, Gujarat (Kandla, Mundra), Maharashtra (Coastal), Southern States (Coastal).

As alternate routes converge at Ajmer, the Project Influence Area (PIA) is considered between Ambala and Ajmer only.

Following figures show the layout of competing routes between both these Zones.

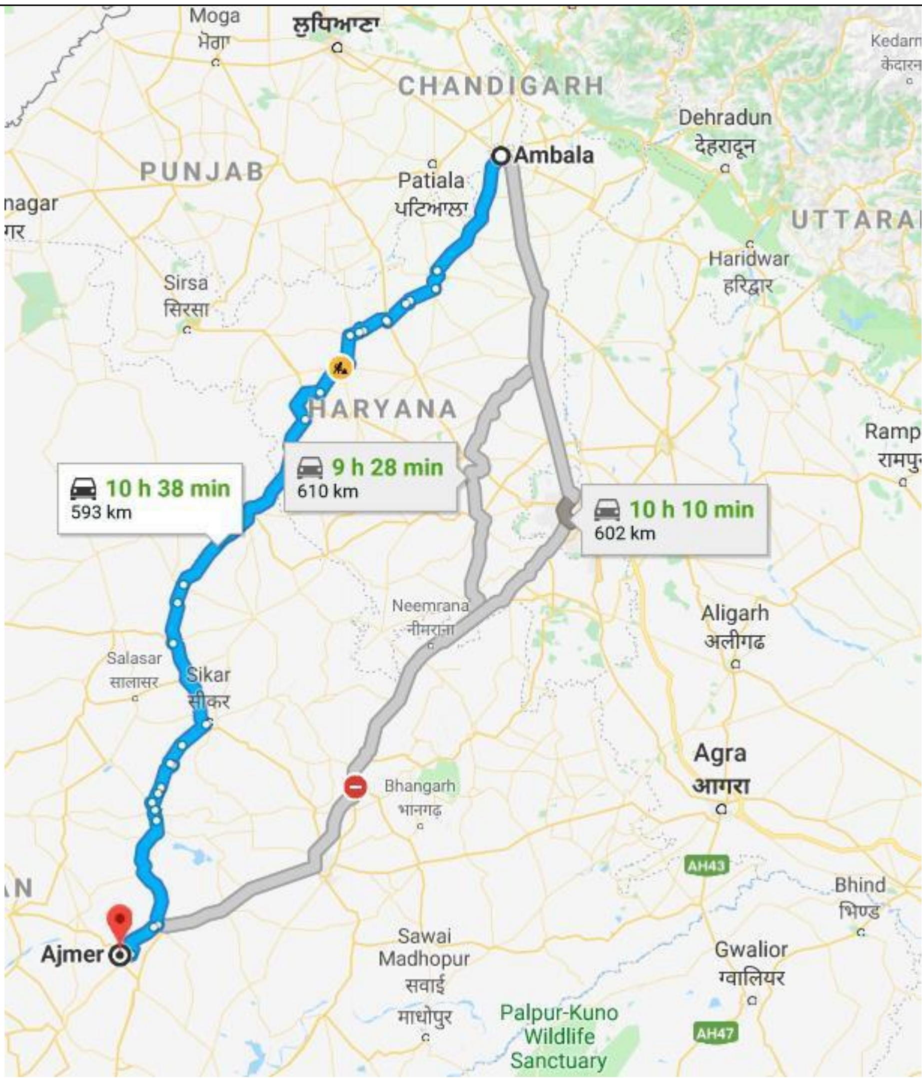

Figure 4-1 : Alternate route at regional level between Zones.

Above figure depicts alternate route between Ambala and Ajmer. Following figure shows alternate routes between Ludhiana and Ajmer

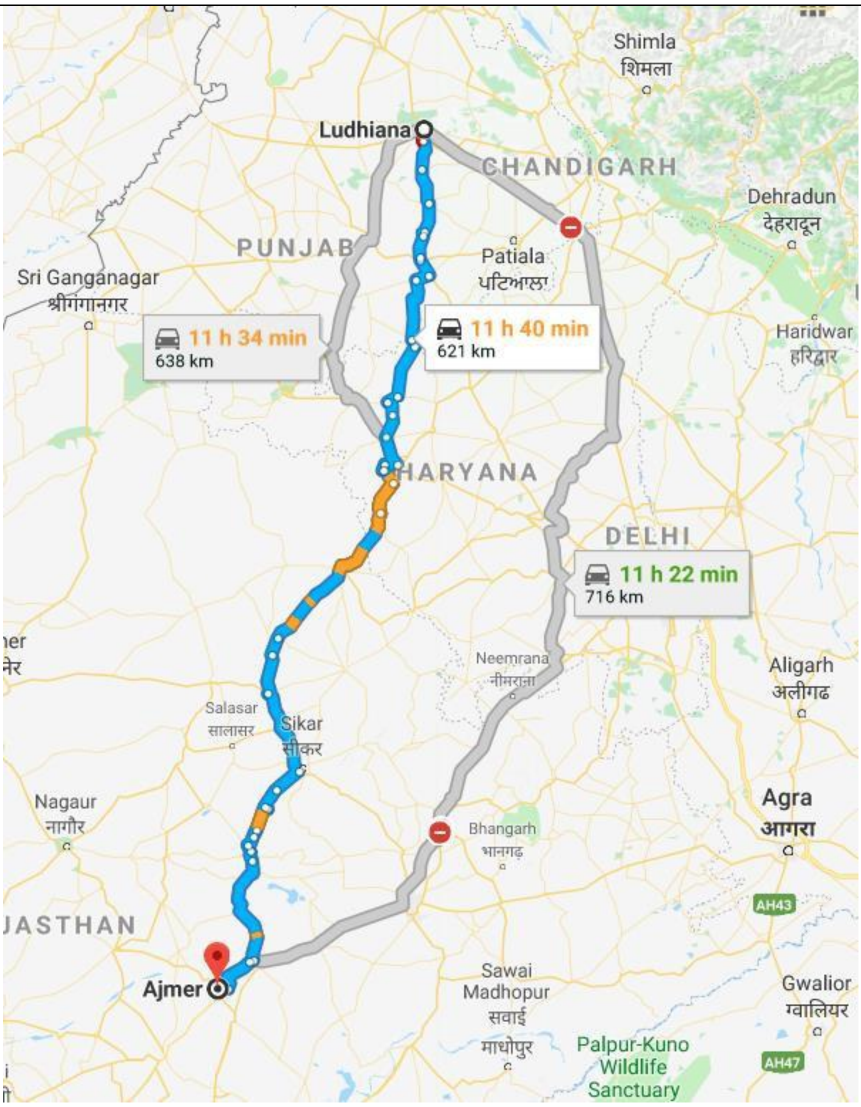

Figure 4-2 : Alternate route at regional level between Ludhiana & Ajmer

From above figures it can be seen that the route containing project alignment has least distance between these origin and destination zones.

Following facts improve probability of target traffic getting attracted to project road.

- Project corridor between Ambala to Rajasthan Border is expected to complete four laning with all bypasses and ROBs.
- Road from Ludhiana to Hisar is part of Bharatmala project and will be converted to four lanes. Currently road from Hisar to Fatehabad only in four lanes.

- Project Corridor is part of ambitious project of Bharatmala which will improve entire length of corridor in terms of capacity and traffic flow. The Government of India has identified the Ludhiana – Ajmer corridor as an optimal route which shall provide time and cost savings to traffic moving from western India to northern India. This will also allow traffic to avoid heavy traffic jams around New Delhi which it is facing on the present route.
- NH-1 and NH-8 which are currently major corridor for traffic between Zone1 and Zone2 will face capacity constraints in coming years. NH-1 for example is four lane road between Ambala and Panipat and runs about 80,000 PCU which is already above its capacity.

At local level it was observed that there is no formidable local alternate route to bypass toll plaza. There can a combination of village roads to form alternate loop around toll plazas, but these are too long as compared to project road between said nodes. Thus, no local diversion of traffic from project road is anticipated.

Following table provide summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Summary Network analysis

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Ambala-Panipat-Karnal-Rohtak-Ajmer	Alternate Route	610	64	9 Hr 28 Min	Alternate route is longer but has shorter travel time. With completion of Ambala - Kaithal four laning of Road induced traffic is expected onto project stretch
	Ambala-Kaithal-Hisar-Ajmer	Project Road	593	55	10 Hr 38 Min	
2	Ludhiana-Chandigarh Panipat-Karnal-Ajmer	Alternate Route	716	63	11 Hr 22 Min	Alternate route is longer but has shorted travel time. With completion of Ambala - Kaithal four laning of Road induced traffic is expected onto project stretch
	Ludhiana - Ambala-Kaithal-Hisar-Ajmer	Project Road	621	53	11 Hr 40 Min	

Table 4-2 : Competing Roads Details

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Kaithal – Rajasthan Border section of NH-152/65 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different type of vehicle. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modelling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

Log (P) = k x Log (EI) + A

Where,

P = Number of Vehicles (Mode wise)

EI = Economic Indicator

A = Regression constant

k = Elasticity coefficient (Regression coefficient)

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Haryana. Toll plazas at Narwana, Badopatti and Choudhariwas are in the state of Haryana, but project stretch is under impact of Rajasthan state as well. In such circumstances for elasticity calculations, working data from above two states has been analysed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Haryana State.

Table 5-1 : Per Capita Income Vs Car Haryana

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	106085	989519	5.03	6.00		
2013	111780	1134616	5.05	6.05	5%	
2014	119791	1278272	5.08	6.11	7%	
2015	125032	1420621	5.10	6.15	4%	
2016	137818	1711692	5.14	6.23	10%	
2017	150241	1851788	5.18	6.27	9%	7.23%

Regression analysis of same is given in figure below.

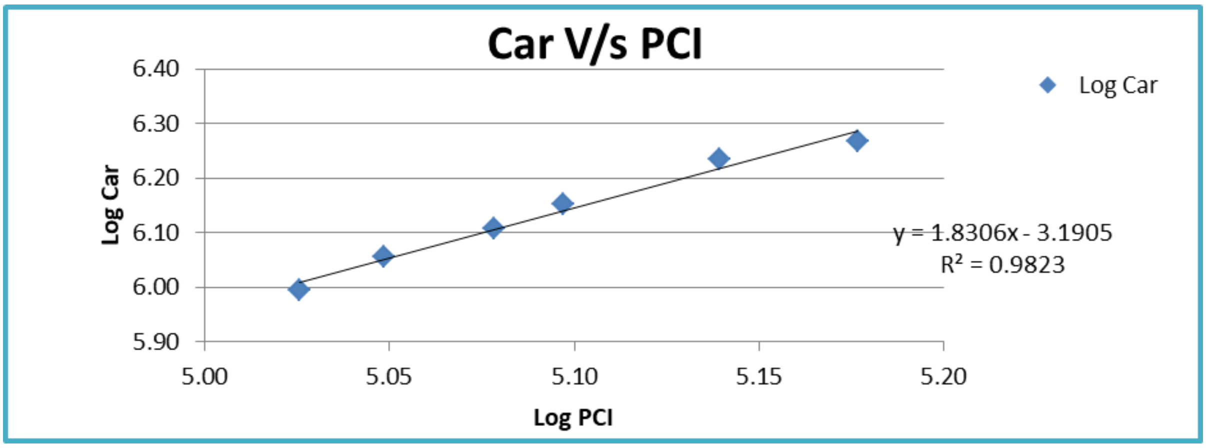

Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Haryana

Table 5-2 : Population Vs Bus Haryana

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	25351462	39153	7.40	4.59		
2013	25751257	43456	7.41	4.64	2%	
2014	26149236	46558	7.42	4.67	2%	
2015	26545282	52640	7.42	4.72	2%	
2016	26939286	55781	7.43	4.75	1%	
2017	27331141	60129	7.44	4.78	1%	1.52%

Regression analysis of same is given in figure below.

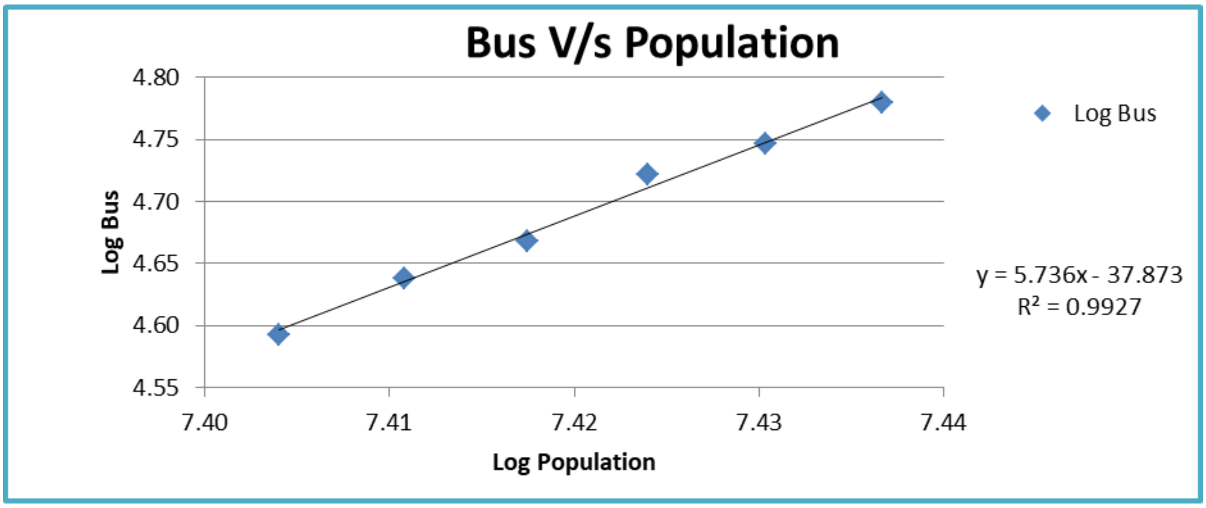

Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Haryana

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Haryana

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	271152	124897	5.43	5.10		
2013	289756	137511	5.46	5.14	7%	
2014	314931	152069	5.50	5.18	9%	
2015	333359	167901	5.52	5.23	6%	
2016	372659	182776	5.57	5.26	12%	8.30%

Following figure depict regression analysis and extrapolation.

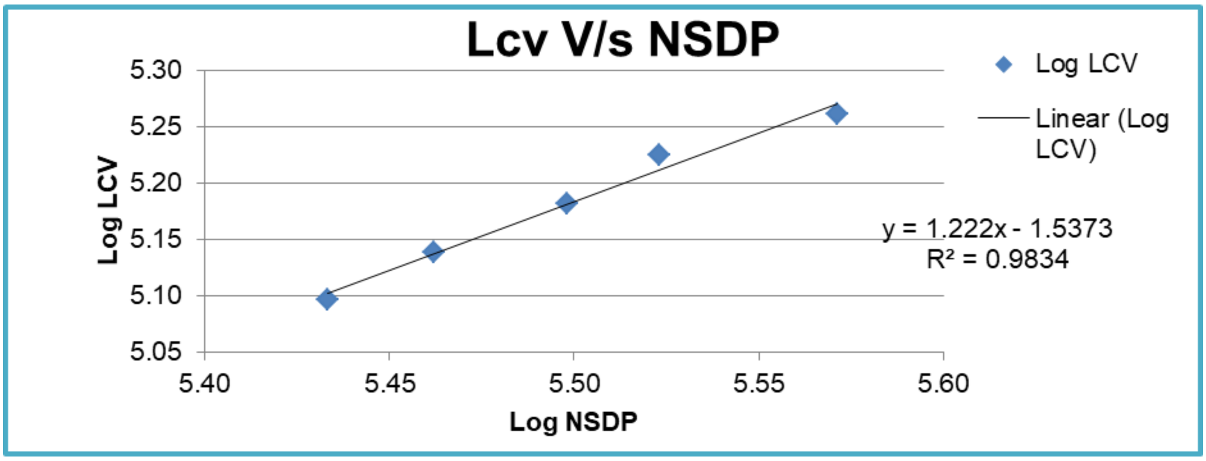

Figure 5-3 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Haryana.

Table 5-4 : Goods Traffic Vs NSDP Haryana

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	271152	292735	5.43	5.47		
2013	289756	307509	5.46	5.49	7%	
2014	314931	327882	5.50	5.52	9%	
2015	333359	348732	5.52	5.54	6%	
2016	372659	367730	5.57	5.57	12%	
2017	412006	390321	5.61	5.59	11%	8.75%

Following figure depict regression analysis and extrapolation.

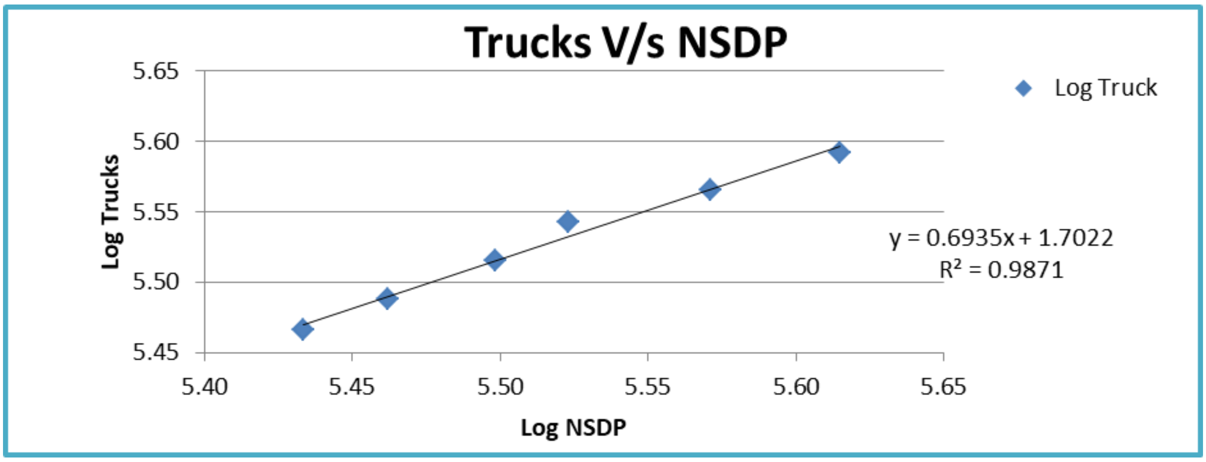

Figure 5-4 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Haryana.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-5 : Summary Regression Analysis Haryana

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Haryana	Car/Jeep	PCI	y = 1.8306x + -3.1905	R^2 = 0.9823	1.8306	7.23%	13.24%	Good Regression
	Bus	Population	y = 5.736x - -37.8732	R^2 = 0.9927	5.7360	1.52%	8.69%	Good Regression
	LCV	NSDP	y = 1.222x - -1.5373	R^2 = 0.9834	1.2220	8.30%	10.14%	Good Regression
	Truck	NSDP	y = 0.6935x - 1.7022	R^2 = 0.9871	0.6935	8.75%	6.07%	Good Regression

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-6 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	57192	591069	4.76	5.77		
2013	58441	659542	4.77	5.82	2%	
2014	61053	733916	4.79	5.87	4%	
2015	64496	814079	4.81	5.91	6%	
2016	68565	899307	4.84	5.95	6%	
2017	71394	988391	4.85	5.99	4%	4.55%

Regression analysis of same is given in figure below.

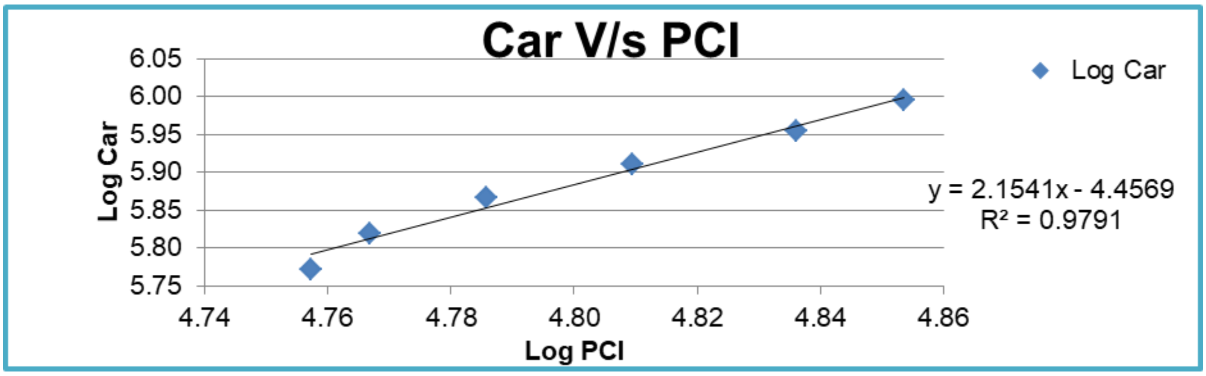

Figure 5-5 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-7 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	68548437	83345	7.84	4.92		
2013	69783885	88616	7.84	4.95	2%	
2014	71016445	93892	7.85	4.97	2%	
2015	72245688	97650	7.86	4.99	2%	
2016	73471198	102818	7.87	5.01	2%	
2017	74692571	108680	7.87	5.04	2%	1.73%

Regression analysis of same is given in figure below.

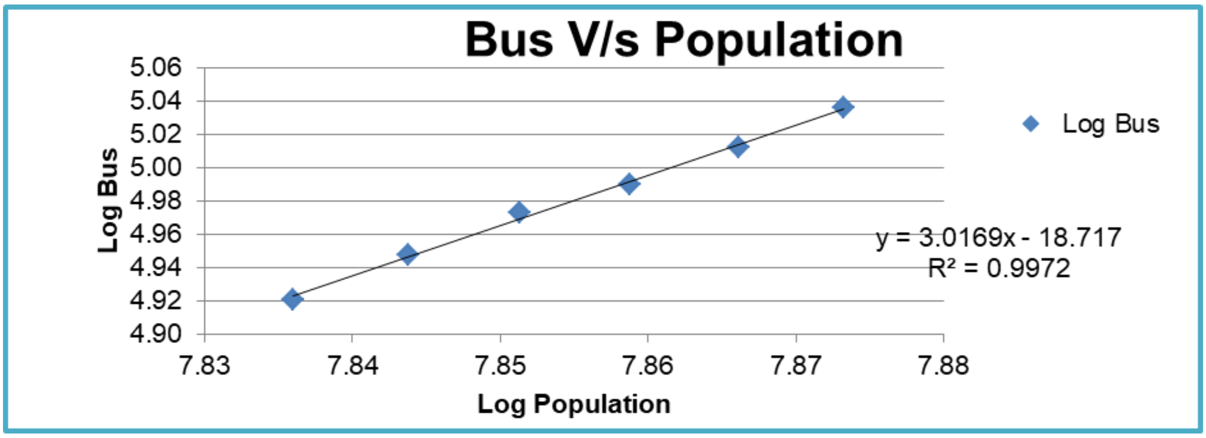

Figure 5-6 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Rajasthan

Year	NSDP	LCV	Log NSDP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	395331	69509	5.60	4.84		
2013	409802	76396	5.61	4.88	4%	
2014	434292	33379	5.64	4.52	6%	
2015	465408	91787	5.67	4.96	7%	
2016	501922	99763	5.70	5.00	8%	6.16%

Following figure depict regression analysis and extrapolation.

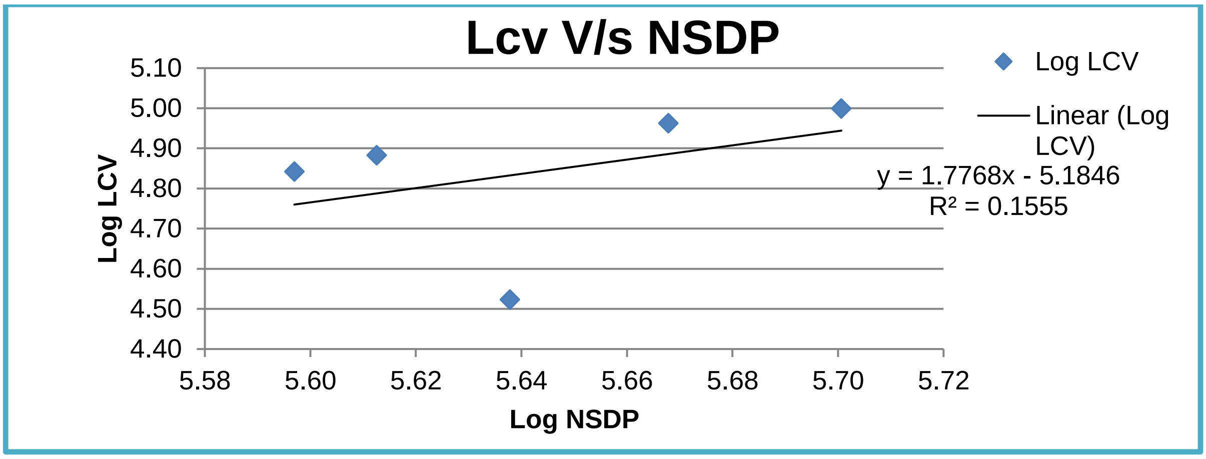

Figure 5-7 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Rajasthan.

Table 5-9 : Goods Traffic Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NSDP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	395331	362028	5.60	5.56		
2013	409802	401983	5.61	5.60	4%	
2014	434292	434379	5.64	5.64	6%	
2015	465408	472365	5.67	5.67	7%	
2016	501922	517604	5.70	5.71	8%	
2017	530172	561158	5.72	5.75	6%	6.06%

Following figure depict regression analysis and extrapolation.

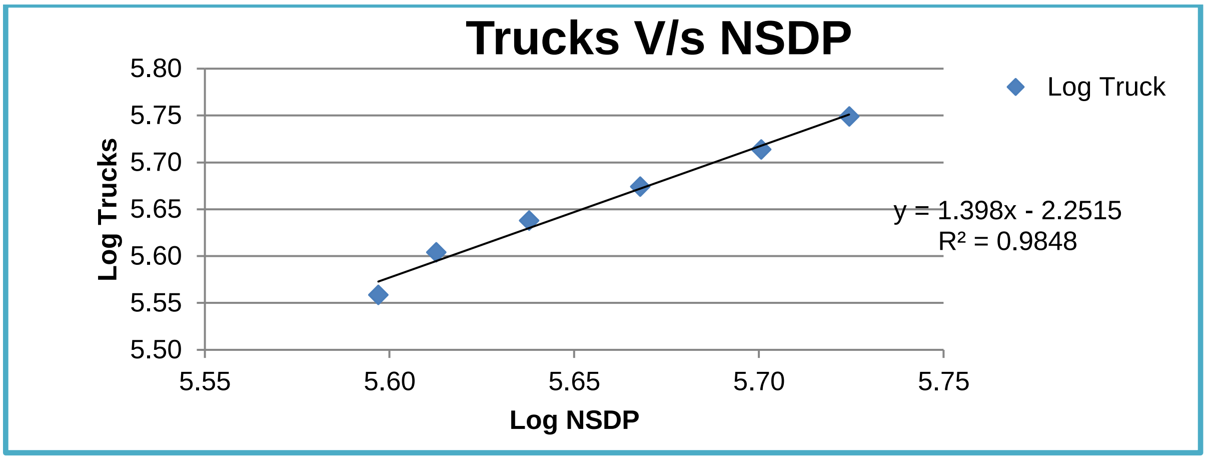

Figure 5-8 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Rajasthan.

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-10 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Rajasthan	Car/Jeep	PCI	y = 2.1541x + -4.4569	R^2 = 0.9791	2.1541	4.55%	9.79%	Good Regression
	Bus	Population	y = 3.0169x - -18.7174	R^2 = 0.9972	3.0169	1.73%	5.22%	Good Regression
	LCV	NSDP	y = 1.7768x - -5.1846	R^2 = 0.1555	1.7768	6.16%	10.95 %	Good Regression

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
	Truck	NSDP	y = 1.398x - - 2.2515	R^2 = 0.9848	1.3980	6.06%	8.46%	Good Regression

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Kaithal to Rajasthan Border is under tolling operation with current concessionaire and has only two years of tolling history from 2018-19. After that traffic was affected due to COVID-19 pandemic. Thus, sufficient data points to be able to establish a reliable past trend of traffic growth are not available. A minimum of about 5 -6 years' consistent traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

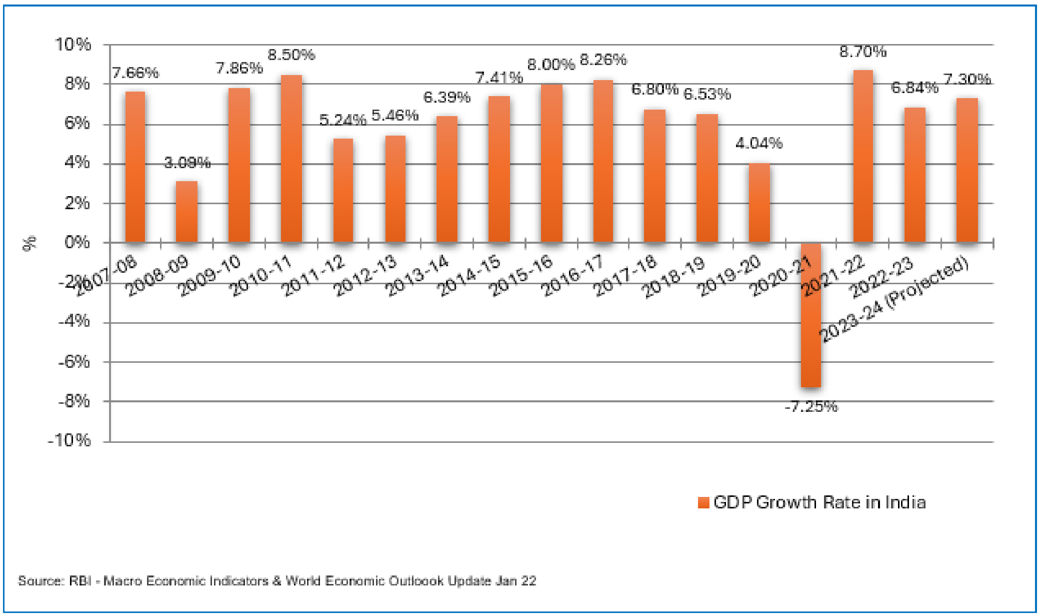

Figure 5-9 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had a slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. The government took major policy decisions including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honourable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in year 2022-23.

5.6 Developments along and around the Project Corridor & State

Project stretch falls in region of good development potential. The same is discussed as under.

Haryana is the largest recipient of investment per capita since 2000 in India, and among one of the wealthiest and most economically developed regions in South Asia. Haryana has the sixth highest per capita income among Indian states and union territories. Haryana is also boosted by 30 SEZs (mainly along DMIC, ADKIC and DWPE in NCR), 7% national agricultural exports, 60% of national Basmati rice export, 67% cars, 60% motorbikes, 50% tractors and 50% refrigerators produced in India. In services. Since Haryana surrounds the country's capital Delhi on three sides (north, west and south), consequently a large area of Haryana is included in the economically important National Capital Region for the purposes of planning and development.

Major Cities of Haryana state & their characteristics are as below.

Faridabad is one of the biggest industrial cities of Haryana as well as North India. Faridabad has been described as eighth fastest growing city in the world and third most in India by City Mayors Foundation survey. Faridabad is home to large-scale companies like Escorts Limited, India Yamaha Motor Pvt. Ltd., Havells India Limited, JCB India Limited, Indian Oil (R&D), Larsen & Toubro (L&T), Whirlpool India Ltd., ABB Group, Goodyear India Ltd., Bata India Ltd and Eicher Tractor Ltd. and Beebay Kidswear. Eyewear e-tailer Lenskart and healthcare startup Lybrate have their headquarters in Faridabad. More than
5,000 units of auto parts producers are based in Faridabad.

Many directorates of different union government ministries are headquartered in Faridabad including Central Ground Water Board, Department of Plant Quarantine and Central Insecticide Lab and Union Government Offices from Haryana including the Commissioner of Central Excise within Department of Revenue, Government of India, Department of Explosives, and Department of Labour. The Apex Central Training Institute of the Department of Revenue, Government of India, National Academy of Customs Excise & Narcotics is located at Sector 29. The National Power Training Institute, an autonomous body under Ministry of Power, Government of India has a corporate office in Faridabad. The city also hosts the National Institute of Financial Management,
which serves as training academy for accounting and financial services. Also

headquartered here is NHPC Limited which is a Central PSU under Ministry of

Power, Government of India and the largest Hydro-power Company in India.

Hisar, city has been identified as a counter-magnet city for the National Capital Region to attract migrants and develop as an alternative centre of growth to Delhi. With upcoming integrated industrial aerocity and aero MRO hub at Hisar Airport, it is a fast-developing city.

The city has a large steel industry and is known as the 'city of steel'. Hisar is India's largest manufacturer of galvanized iron. The Jindal Group is based in Hisar. Jindal Stainless Steel is also the world's largest producer of Stainless-Steel strips for razor blades and India's largest producer of coin blanks. Textile and automobile industry is also a major contributor to the economy of the city. It also has a large number of livestock farms with the Central Livestock Farm, established in 1809 being one of the Asia's largest cattle farms.

Panipat city is famous in India by the name of "City of Weavers" and "Textile City". It is also known as the "cast-off capital" due to being "the global centre for recycling textiles. It is known for its woven modhas or round stools. Panipat has heavy industry, including a refinery operated by the Indian Oil Corporation, a urea manufacturing plant operated by National Fertilizers Limited and a National Thermal Power Corporation power plant. The IOCL refinery in Panipat is one of the major Industry in area which contributes to growth.

Gurugram: Witnessing rapid urbanisation, Gurgaon has become a leading financial and industrial hub with the third-highest per capita income in India. Gurgaon ranks number 1 in India in IT growth rate and existing technology infrastructure, and number 2 in startup ecosystem, innovation and livability.

The city's economic growth story started when the leading Indian automobile manufacturer Maruti Suzuki India Limited established a manufacturing plant in Gurgaon in the 1970s. Today, Gurgaon has local offices for more than 250.
Fortune 500 companies. Various international companies, including Coca-Cola, Pepsi, BMW, Agilent Technologies, Hyundai have chosen Gurugram to be their Indian corporate headquarters.
IMT Minesar, Dundahera and Sohna are industrial and logistics hub, that also has National Security Guards, Indian Institute of Corporate Affairs, National
Brain Research Centre and National Bomb Data Centre. Retail is an important industry in Gurgaon, with the presence of 26 shopping malls.

Ambala is connected to all the other major cities of north India including Delhi, Panipat, Chandigarh, Ludhiana, Amritsar and Shimla. It is a big interchange for various commuters for all neighboring states. The Ambala Cantt bus stand witnesses roughly 50,000 commuters daily.

National highway NH 1 popularly known as GT road passes through Ambala and connects it to National capital Delhi, Panipat, Ludhiana and Amritsar. NH 22 connects it to state capital Chandigarh and Shimla. National Highway 52 (new NH-165) connects it to Kaithal, Narwana and Hisar.

Being located in the Indo-Gangetic Plain, the land is generally fertile and conducive to agriculture.

Small scale industries form the bulk of the industrial landscape in the district. It is one of the largest producers of scientific and surgical instruments in the country and home to a large number of scientific instrument manufacturers. It produces microscopes and other instruments used in chemistry laboratories. Manufacture of submersible pumps and mixers and grinders is another industry that has traditionally flourished.

Ambala is also an important textile trading centre, besides Delhi and Ludhiana and has a well-known cloth market, which is famous in the region especially for those seeking bridal wear. It also produces rugs, known locally as Durries, and houses many suppliers to Indian defence forces.

Punjab state is one of the most fertile regions in India. The region is ideal for wheat-growing. Rice, sugar cane, fruits and vegetables are also grown. Punjab is called the "Granary of India" or "India's breadbasket". It produces 10.26% of India's cotton, 19.5% of India's wheat, and 11% of India's rice. The Firozpur and Fazilka Districts are the largest producers of wheat and rice in the state. In worldwide terms, Indian Punjab produces 2% of the world's cotton, 2% of its wheat and 1% of its rice. The largest cultivated crop is wheat. Other important crops are rice, cotton, sugarcane, pearl millet, maize, barley and fruit.

Ludhiana is one of the City in India with best business environment. The riches are brought mostly by small-scale industrial units, which produce industrial goods, machine parts, auto parts, household appliances, hosiery, apparel, and garments. Ludhiana is Asia's largest hub for bicycle manufacturing and produces more than 50% of India's bicycle consumption of more than 10 million each.

year. Ludhiana produces 60% of India's tractor parts and a large portion of auto.

and two-wheeler parts. Many parts used in German cars are Mercedes and BMW exclusively produced in Ludhiana to satisfy the world requirement. It is one of the largest manufacturers of domestic sewing machines. Hand tools and industrial equipment are other specialties. The apparel industry of Ludhiana is famous all over India for its woollen sweaters and cotton T-shirts; most of the top Indian woollen apparel brands are based in Ludhiana. Ludhiana also has a growing IT sector with multiple software services and product companies having development centers in the city.

Chandigarh has been rated as one of the "Wealthiest Towns" of India. The Reserve Bank of India ranked Chandigarh as the Third largest deposit centre and seventh largest credit centre nationwide.

Chandigarh is ranked 4th in the top 50 cities identified globally as "emerging outsourcing and IT services destinations" ahead of cities like Beijing. Chandigarh IT Park (also known as Rajiv Gandhi Chandigarh Technology Park) is the city's attempt to break into the information technology world. Major Indian firms and multinational corporations like Quark, Infosys, EVRY, Dell, IBM, TechMahindra, Airtel, Amadeus IT Group, DLF have set up base in the city and its suburbs.

Additionally, the government is a major employer in Chandigarh with three governments having their base here i.e. Chandigarh Administration, Punjab government and Haryana government.

Ordnance Cable Factory of the Ordnance Factories Board has been set up by the Government of India. There are about 15 mediums to large industries including two in the public sector. In addition, Chandigarh has over 2500 units registered under small-scale sector. The important industries are paper manufacturing, basic metals and alloys and machinery. Other industries are relating to food products, sanitary ware, auto parts, machine tools, pharmaceuticals and electrical appliances.

Rajasthan state is a fast-developing state. Last year Rajasthan was the leading investment destination in India after Maharashtra and Gujarat because of peaceful environment, relatively better law and order situation, excellent infrastructure, and investment friendly climate. Rajasthan is pre-eminent in quarrying and mining in India. The state is the second largest source of cement. It has rich salt deposits at Sambhar, copper mines at Khetri and zinc mines at Dariba and Zawar. Jaipur is the capital and largest city of Rajasthan. It is also.

known as Pink City of India and a famous travel destination.

There is large amount of information available on open platform including internet regarding this. Relevant information is compiled as under.

Delhi Mumbai Industrial Corridor (DMIC)

Rajasthan is strategically located along the Delhi-Mumbai section of the Golden Quadrilateral highway project, the proposed Dedicated Freight Corridor (DFC) and the Delhi Mumbai Industrial Corridor (DMIC).

Rajasthan has access to 46% of DMIC. It falls within major districts of Jaipur, Alwar, Kota and Bhilwara. Over 58% area of the state falls within the influence area of DMIC. The DMIC will provide high quality environment with state-of-the-art infrastructure for new investors.

The state of Rajasthan has a rich agricultural and mineral base. Key industrial sectors in the state include Cement, Building Stones, Gypsum, Gems & Jewellery, Chemical, Food processing and Textiles. The emerging sectors include IT/ITES, Auto Component and Knowledge Hubs. Based on the strengths of specific regions across the state, five development nodes are identified in the influence area of DMIC. It includes two investment regions and three industrial areas.

Project road would act as feeder road for traffic destined for DMIC logistic hubs from northern states.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-11 : Recommended Growth Rates Optimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	5.67%	5.45%	5.22%	5.00%	4.78%	4.56%
Bus	3.21%	3.09%	2.72%	2.61%	2.50%	2.40%
LCV	3.38%	3.17%	2.72%	2.53%	2.35%	2.17%
2- Axle	3.96%	3.74%	3.23%	3.04%	2.86%	2.67%
3 - Axle	3.96%	3.74%	3.23%	3.04%	2.86%	2.67%
4 to 6 Axle	3.96%	3.74%	3.53%	3.32%	3.12%	2.91%
7 and Above Axle	3.96%	3.74%	3.53%	3.32%	3.12%	2.91%

Table 5-12 : Recommended Growth Rates Pessimistic

Category / Year	2024-2026	2026-2031	2031-2036	2036-2040	2041-2046	2046-2051
Car/Jeep/Van	5.17%	4.95%	4.72%	4.50%	4.28%	4.06%
Bus	2.71%	2.59%	2.22%	2.11%	2.00%	1.90%
LCV	2.88%	2.67%	2.22%	2.03%	1.85%	1.67%

Category / Year	2024-2026	2026-2031	2031-2036	2036-2040	2041-2046	2046-2051
2- Axle	3.46%	3.24%	2.73%	2.54%	2.36%	2.17%
3 - Axle	3.46%	3.24%	2.73%	2.54%	2.36%	2.17%
4 to 6 Axle	3.46%	3.24%	3.03%	2.82%	2.62%	2.41%
7 and Above Axle	3.46%	3.24%	3.03%	2.82%	2.62%	2.41%

Table 5-13 : Recommended Growth Rates Most Likely

Category / Year	2024-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	5.42%	5.20%	4.97%	4.75%	4.53%	4.31%
Bus	2.96%	2.84%	2.47%	2.36%	2.25%	2.15%
LCV	3.13%	2.92%	2.47%	2.28%	2.10%	1.92%
2- Axle	3.71%	3.49%	2.98%	2.79%	2.61%	2.42%
3 - Axle	3.71%	3.49%	2.98%	2.79%	2.61%	2.42%
4 to 6 Axle	3.71%	3.49%	3.28%	3.07%	2.87%	2.66%
7 and Above Axle	3.71%	3.49%	3.28%	3.07%	2.87%	2.66%

Traffic and revenue have been worked out on the basis of above growths and same is presented in subsequent chapter of report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in previous section of report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for following three cases of growth up to concession period.

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Narwana 125.00 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	4282	367	338	477	321	1382	48	7215	14676
2024-25	4524	380	349	495	334	1436	50	7568	15315
2025-26	4770	392	360	514	347	1490	52	7925	15960
2026-27	5030	404	371	533	360	1546	54	8298	16628
2027-28	5304	416	382	553	373	1604	56	8688	17322
2028-29	5593	429	394	574	387	1663	58	9098	18046
2029-30	5898	442	406	596	401	1725	60	9528	18803
2030-31	6207	454	417	615	414	1786	62	9955	19542
2031-32	6532	466	428	635	427	1849	64	10401	20310
2032-33	6873	478	439	655	441	1915	66	10867	21110
2033-34	7232	491	451	676	455	1983	68	11356	21944
2034-35	7610	504	463	698	469	2053	70	11867	22810
2035-36	7990	516	475	719	483	2121	72	12376	23664
2036-37	8389	529	487	741	497	2192	74	12909	24555
2037-38	8808	542	499	763	512	2265	76	13465	25478
2038-39	9248	555	512	786	527	2341	78	14047	26441
2039-40	9710	568	525	810	543	2419	81	14656	27446
2040-41	10174	581	538	833	558	2495	83	15262	28434
2041-42	10659	594	551	857	574	2573	86	15894	29462
2042-43	11169	607	564	882	590	2653	89	16554	30527
2043-44	11702	621	578	907	607	2735	92	17242	31631
2044-45	12261	635	592	933	625	2820	95	17961	32781
2045-46	12820	648	606	958	642	2902	98	18674	33910
2046-47	13404	661	620	983	660	2987	101	19416	35081
2047-48	14016	675	634	1009	678	3074	104	20190	36293
2048-49	14656	689	649	1036	696	3164	107	20997	37552

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Badopatti 171.00 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	4132	306	405	437	336	1130	55	6800	13455
2024-25	4366	317	418	454	349	1175	57	7136	14049
2025-26	4604	328	432	470	362	1219	59	7474	14639
2026-27	4854	339	446	487	375	1264	61	7826	15249
2027-28	5118	350	460	505	389	1311	63	8196	15888
2028-29	5397	361	474	524	403	1360	65	8584	16554
2029-30	5692	373	489	543	418	1410	67	8992	17248
2030-31	5990	384	503	560	431	1459	69	9396	17924
2031-32	6303	395	517	578	445	1510	71	9819	18630
2032-33	6633	406	531	597	459	1564	73	10263	19370
2033-34	6979	417	546	616	474	1619	76	10727	20140
2034-35	7343	429	561	635	489	1676	79	11212	20939
2035-36	7709	440	576	654	504	1732	82	11697	21734
2036-37	8095	451	591	674	519	1789	85	12204	22557
2037-38	8500	463	606	694	535	1848	88	12734	23412
2038-39	8925	475	622	714	551	1909	91	13287	24299
2039-40	9371	487	638	735	567	1973	94	13865	25223
2040-41	9819	499	654	755	583	2034	97	14441	26133
2041-42	10288	511	670	776	599	2098	100	15042	27081
2042-43	10780	523	686	797	616	2164	103	15669	28063
2043-44	11295	535	703	820	633	2231	106	16323	29082
2044-45	11835	547	720	843	651	2300	109	17005	30138
2045-46	12375	559	737	866	668	2367	112	17684	31182
2046-47	12940	571	754	889	686	2436	115	18391	32263
2047-48	13529	583	772	913	704	2507	118	19126	33383
2048-49	14147	595	791	937	722	2580	121	19893	34544

Table 6-3 : Total Tollable Traffic @ Toll Plaza 3- Chainage 212.00 KM

(Optimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	4167	356	164	497	452	1656	65	7356	15782
2024-25	4403	369	169	516	469	1721	67	7714	16465
2025-26	4643	381	174	535	487	1785	69	8074	17146
2026-27	4895	393	179	555	505	1852	72	8451	17860
2027-28	5161	406	184	576	524	1921	75	8847	18604
2028-29	5442	419	189	597	544	1993	78	9262	19380
2029-30	5738	432	195	619	564	2067	81	9696	20186
2030-31	6037	444	200	639	582	2140	84	10126	20974
2031-32	6352	456	205	660	601	2215	87	10576	21793
2032-33	6683	469	210	681	620	2294	90	11047	22648
2033-34	7031	482	215	703	640	2375	93	11539	23534

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2034-35	7397	495	221	725	661	2459	96	12054	24458
2035-36	7766	508	227	747	681	2541	99	12569	25373
2036-37	8155	521	233	769	702	2625	102	13107	26320
2037-38	8563	534	239	792	723	2713	105	13669	27307
2038-39	8991	547	245	816	745	2803	108	14255	28329
2039-40	9440	560	251	841	767	2896	112	14867	29393
2040-41	9891	573	257	865	789	2986	115	15476	30438
2041-42	10364	586	263	890	811	3079	119	16112	31526
2042-43	10858	599	269	916	834	3175	123	16774	32655
2043-44	11377	613	275	942	857	3274	127	17465	33823
2044-45	11921	627	281	969	881	3376	131	18186	35036
2045-46	12465	640	287	995	904	3474	135	18900	36224
2046-47	13034	653	293	1022	928	3575	139	19644	37456
2047-48	13629	667	300	1049	952	3679	143	20419	38732
2048-49	14251	681	307	1077	977	3786	147	21226	40054

Table 6-4 : Total Tollable Traffic @ Toll Plaza 1- Chainage 125.000 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	4282	367	338	477	321	1382	48	7215	14676
2024-25	4503	377	347	493	332	1429	50	7531	15240
2025-26	4726	387	356	509	343	1476	52	7849	15807
2026-27	4960	397	365	525	354	1524	54	8179	16389
2027-28	5206	407	375	542	366	1573	56	8525	16996
2028-29	5464	417	385	560	378	1624	58	8886	17628
2029-30	5734	427	395	578	390	1677	60	9261	18280
2030-31	6005	436	404	594	401	1728	62	9630	18911
2031-32	6288	445	413	610	412	1780	64	10012	19559
2032-33	6585	455	422	626	423	1834	66	10411	20231
2033-34	6896	465	432	643	435	1890	68	10829	20935
2034-35	7223	475	442	661	447	1947	70	11265	21662
2035-36	7548	484	451	677	459	2001	72	11692	22364
2036-37	7888	494	461	694	471	2058	74	12140	23101
2037-38	8243	504	471	712	483	2116	76	12605	23861
2038-39	8614	514	481	730	495	2175	78	13087	24642
2039-40	9001	524	491	749	508	2237	80	13590	25458
2040-41	9386	533	501	767	520	2295	82	14084	26246
2041-42	9787	543	511	785	532	2355	84	14597	27061
2042-43	10206	553	521	804	545	2417	86	15132	27909
2043-44	10642	563	531	823	558	2480	88	15685	28779
2044-45	11097	573	542	842	571	2544	90	16259	29675
2045-46	11547	582	552	860	583	2606	92	16822	30546
2046-47	12016	592	562	879	596	2669	94	17408	31449
2047-48	12503	602	573	898	609	2733	96	18014	32377
2048-49	13011	612	584	917	622	2799	98	18643	33335

Table 6-5 : Total Tollable Traffic @ Toll Plaza 2- Chainage 171.00 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	4132	306	405	437	336	1130	55	6800	13455
2024-25	4345	316	416	452	347	1168	56	7100	13972
2025-26	4561	324	427	466	358	1205	58	7399	14484
2026-27	4786	332	438	481	370	1244	60	7711	15019
2027-28	5022	340	449	496	382	1285	62	8036	15575
2028-29	5270	348	461	511	394	1327	64	8375	16150
2029-30	5530	356	473	527	407	1370	66	8729	16747
2030-31	5790	364	484	541	418	1412	68	9077	17325
2031-32	6064	372	495	555	429	1455	70	9440	17922
2032-33	6350	380	506	570	441	1499	72	9818	18541
2033-34	6650	388	517	585	453	1544	74	10211	19178
2034-35	6964	396	528	600	465	1591	76	10620	19839
2035-36	7278	404	539	615	477	1636	78	11027	20490
2036-37	7605	412	550	630	489	1682	80	11448	21159
2037-38	7947	420	562	646	501	1729	82	11887	21854
2038-39	8304	428	574	662	514	1777	84	12343	22571
2039-40	8678	436	586	678	527	1827	86	12818	23314
2040-41	9050	444	598	694	539	1875	88	13288	24043
2041-42	9437	452	610	710	552	1924	90	13775	24794
2042-43	9841	460	622	726	565	1974	92	14280	25567
2043-44	10263	468	634	742	578	2026	94	14805	26367
2044-45	10702	476	646	759	591	2079	96	15349	27192
2045-46	11137	484	658	775	604	2129	98	15885	27996
2046-47	11589	492	670	791	617	2180	100	16439	28821
2047-48	12059	500	682	808	630	2233	102	17014	29677
2048-49	12550	508	695	825	644	2287	104	17613	30564

Table 6-6 : Total Tollable Traffic @ Toll Plaza 3- Chainage 212.00 KM (Pessimistic Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	4167	356	164	497	452	1656	65	7356	15782
2024-25	4383	368	169	514	467	1713	67	7681	16395
2025-26	4599	378	173	530	482	1769	69	8000	16992
2026-27	4825	388	177	548	498	1826	71	8333	17613
2027-28	5064	398	182	566	515	1885	73	8683	18261
2028-29	5314	408	187	585	532	1946	75	9047	18933
2029-30	5577	419	192	604	549	2009	77	9427	19628
2030-31	5840	429	196	620	564	2069	79	9797	20290
2031-32	6115	439	200	637	580	2132	81	10184	20983
2032-33	6403	449	204	655	596	2197	83	10587	21702

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2033-34	6705	459	209	673	613	2263	85	11007	22445
2034-35	7021	469	214	692	630	2331	88	11445	23218
2035-36	7337	479	219	710	646	2397	90	11878	23972
2036-37	7666	489	224	728	663	2464	92	12326	24747
2037-38	8011	499	229	747	680	2533	95	12794	25554
2038-39	8370	509	234	766	697	2605	98	13279	26388
2039-40	8746	519	239	785	715	2679	101	13784	27252
2040-41	9120	529	244	804	732	2750	104	14283	28097
2041-42	9511	539	249	823	749	2822	107	14800	28963
2042-43	9918	549	254	842	767	2896	110	15336	29858
2043-44	10343	559	259	862	785	2971	113	15892	30778
2044-45	10785	569	264	882	804	3048	116	16468	31727
2045-46	11224	579	269	901	822	3122	119	17036	32653
2046-47	11680	589	274	921	840	3197	122	17623	33604
2047-48	12154	599	279	941	858	3274	125	18230	34582
2048-49	12648	609	284	961	877	3353	128	18860	35592

Traffic projections for Most Likely scenario is given as under

Table 6-7 : Total Tollable Traffic @ Toll Plaza 1- Chainage 125.000 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	4282	367	338	477	321	1382	48	7215	14676
2024-25	4514	378	348	494	333	1433	50	7550	15280
2025-26	4748	388	358	511	345	1483	52	7885	15880
2026-27	4994	398	368	529	357	1535	54	8235	16504
2027-28	5253	409	378	548	370	1588	56	8602	17153
2028-29	5526	420	389	567	383	1643	58	8986	17828
2029-30	5813	432	400	586	396	1700	60	9387	18527
2030-31	6102	442	410	604	408	1756	62	9784	19212
2031-32	6405	452	420	622	420	1814	64	10197	19920
2032-33	6724	462	430	641	433	1873	66	10629	20655
2033-34	7059	473	441	660	446	1935	68	11082	21423
2034-35	7410	484	452	679	459	1998	70	11552	22212
2035-36	7762	494	463	698	472	2060	72	12021	22996
2036-37	8130	505	474	717	485	2123	74	12508	23802
2037-38	8516	516	485	737	498	2188	76	13016	24638
2038-39	8921	527	496	758	512	2255	78	13547	25508
2039-40	9344	538	507	779	526	2324	80	14098	26405
2040-41	9767	549	518	799	540	2391	82	14646	27290
2041-42	10209	560	529	820	554	2459	84	15215	28202
2042-43	10671	571	541	842	568	2530	86	15809	29153
2043-44	11154	582	553	864	583	2602	88	16426	30132
2044-45	11659	594	565	886	598	2676	90	17068	31144
2045-46	12161	605	577	908	612	2747	92	17702	32135
2046-47	12686	616	589	930	627	2820	94	18362	33161
2047-48	13233	627	601	952	642	2896	96	19047	34223

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2048-49	13803	638	613	975	657	2973	99	19758	35319

Table 6-8 : Total Tollable Traffic @ Toll Plaza 2- Chainage 171.00 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	4132	306	405	437	336	1130	55	6800	13455
2024-25	4356	316	417	453	348	1171	56	7117	14006
2025-26	4583	324	429	468	360	1212	58	7434	14555
2026-27	4821	333	441	484	373	1254	60	7766	15128
2027-28	5071	342	453	500	386	1298	62	8112	15721
2028-29	5335	353	465	517	399	1343	64	8476	16339
2029-30	5612	364	479	535	413	1390	66	8859	16991
2030-31	5891	372	491	550	425	1435	68	9232	17611
2031-32	6184	380	503	566	438	1482	70	9623	18259
2032-33	6491	389	515	582	451	1530	72	10030	18928
2033-34	6814	398	527	599	464	1580	74	10456	19624
2034-35	7153	407	540	616	478	1632	76	10902	20352
2035-36	7493	416	552	632	491	1682	78	11344	21062
2036-37	7848	425	565	649	505	1734	80	11806	21806
2037-38	8220	434	579	667	519	1787	82	12288	22577
2038-39	8611	443	593	686	533	1842	84	12792	23379
2039-40	9021	453	607	705	548	1899	87	13320	24218
2040-41	9431	462	621	723	562	1954	89	13842	25036
2041-42	9858	471	635	742	576	2010	91	14383	25878
2042-43	10305	480	650	761	591	2067	94	14948	26756
2043-44	10771	490	665	781	606	2126	97	15536	27666
2044-45	11259	500	680	801	622	2186	100	16148	28605
2045-46	11745	509	695	820	637	2244	103	16753	29526
2046-47	12251	518	710	840	652	2303	106	17380	30475
2047-48	12780	527	725	860	668	2364	109	18033	31458
2048-49	13330	537	740	880	684	2427	112	18710	32473

Table 6-9 : Total Tollable Traffic @ Toll Plaza 3- Chainage 212.00 KM (Most Likely Growth Scenario)

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	4167	356	164	497	452	1656	65	7356	15782
2024-25	4393	368	169	515	468	1717	67	7697	16429
2025-26	4622	379	174	533	485	1777	69	8039	17074
2026-27	4862	390	179	552	502	1839	71	8395	17741

Year	Car	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2027-28	5114	402	184	571	520	1903	73	8767	18434
2028-29	5380	414	189	591	538	1969	75	9156	19153
2029-30	5659	426	194	612	557	2037	78	9563	19905
2030-31	5940	436	199	630	574	2104	80	9963	20631
2031-32	6235	447	204	649	591	2173	83	10382	21390
2032-33	6544	458	209	668	609	2245	86	10819	22179
2033-34	6869	470	214	688	627	2319	89	11276	22997
2034-35	7210	482	219	708	646	2395	92	11752	23844
2035-36	7552	493	224	728	664	2469	95	12225	24678
2036-37	7910	505	229	748	683	2545	98	12718	25541
2037-38	8286	517	234	769	702	2623	101	13232	26435
2038-39	8680	529	239	790	722	2704	104	13768	27363
2039-40	9092	541	244	812	742	2787	107	14325	28321
2040-41	9504	553	249	833	761	2867	110	14877	29259
2041-42	9934	565	254	854	781	2949	113	15450	30228
2042-43	10384	577	260	876	801	3033	116	16047	31231
2043-44	10854	589	266	898	822	3120	119	16668	32271
2044-45	11345	601	272	921	843	3210	122	17314	33349
2045-46	11834	613	278	943	863	3295	125	17951	34396
2046-47	12344	625	284	965	884	3383	128	18613	35480
2047-48	12877	637	290	988	905	3473	131	19301	36600
2048-49	13433	649	296	1012	927	3565	134	20016	37757

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Kaithal – Rajasthan Border project, the Target Date and Target Traffic are defined as under:

Target Date - 1st April 2023

Target Traffic - 21919 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. Probable extension of concession period is estimated according to article 29 of concession agreement which comes to about 5 years. Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	21919	15061	-31%	47%	20%	27	5.4

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	21919	15074	-31%	47%	20%	27	5.4

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	21919	15049	-31%	47%	20%	27	5.4

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

As per the Toll Notification (Schedule - R) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued at fee 50 time the single journey fee.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: Local Car Jeep Van - Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza) and local commercial and 50% rate of single trip.

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A} - \text{WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series.

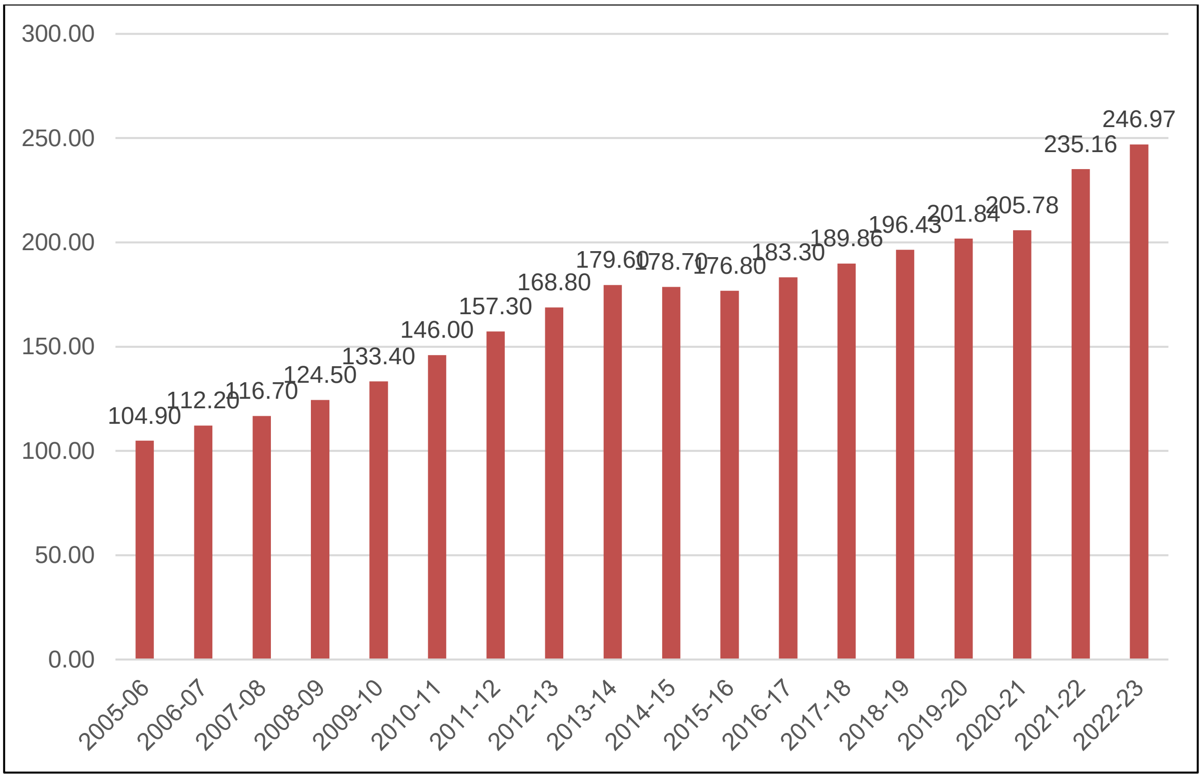

Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in last few years is steadily growing. It grew in range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey @ Km 125.000

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	90	140	295	295	325	465	565
2024-25	90	145	305	305	330	475	580
2025-26	95	155	320	320	350	500	610
2026-27	100	160	335	335	365	525	640
2027-28	105	170	355	355	385	555	675
2028-29	110	175	370	370	405	580	710
2029-30	115	185	390	390	425	610	745
2030-31	120	195	410	410	445	645	785
2031-32	125	205	430	430	470	675	825
2032-33	135	215	455	455	495	710	865
2033-34	140	230	475	475	520	750	910
2034-35	150	240	500	500	550	785	960
2035-36	155	250	530	530	575	830	1010
2036-37	165	265	555	555	605	875	1060
2037-38	175	280	585	585	640	920	1120
2038-39	180	295	615	615	675	970	1180
2039-40	190	310	650	650	710	1020	1240
2040-41	200	325	685	685	745	1075	1310
2041-42	215	345	720	720	790	1130	1380
2042-43	225	365	760	760	830	1195	1455
2043-44	235	385	800	800	875	1260	1530
2044-45	250	405	845	845	925	1325	1615
2045-46	265	425	890	890	975	1400	1705
2046-47	280	450	940	940	1025	1475	1795
2047-48	295	475	995	995	1085	1555	1895
2048-49	310	500	1050	1050	1145	1645	2000

Table 7-3 : Toll Rates for Single Journey @ Km 171.00

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	120	190	400	400	440	630	765
2024-25	120	195	410	410	450	645	785
2025-26	130	205	430	430	470	680	825
2026-27	135	215	455	455	495	710	865
2027-28	140	230	475	475	520	750	910
2028-29	150	240	500	500	545	785	955
2029-30	155	250	525	525	575	825	1005
2030-31	165	265	555	555	605	870	1060
2031-32	170	280	585	585	635	915	1115
2032-33	180	295	615	615	670	960	1170
2033-34	190	310	645	645	705	1010	1230
2034-35	200	325	680	680	740	1065	1295
2035-36	210	340	715	715	780	1120	1365
2036-37	220	360	750	750	820	1180	1435
2037-38	235	380	790	790	865	1240	1510
2038-39	245	400	835	835	910	1310	1595

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2039-40	260	420	880	880	960	1380	1680
2040-41	275	440	925	925	1010	1450	1770
2041-42	290	465	975	975	1065	1530	1865
2042-43	305	490	1030	1030	1120	1615	1965
2043-44	320	520	1085	1085	1185	1700	2070
2044-45	340	545	1145	1145	1250	1795	2185
2045-46	355	575	1205	1205	1315	1890	2305
2046-47	375	605	1275	1275	1390	1995	2430
2047-48	395	640	1345	1345	1465	2105	2565
2048-49	420	675	1415	1415	1545	2220	2705

Table 7-4 : Toll Rates for Single Journey @ Km 212.00

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	70	110	235	235	255	365	445
2024-25	70	115	240	240	260	375	455
2025-26	75	120	250	250	275	395	480
2026-27	80	125	265	265	285	415	500
2027-28	80	130	275	275	300	435	530
2028-29	85	140	290	290	315	455	555
2029-30	90	145	305	305	335	480	585
2030-31	95	155	320	320	350	505	615
2031-32	100	160	340	340	370	530	645
2032-33	105	170	355	355	390	555	680
2033-34	110	180	375	375	410	585	715
2034-35	115	190	395	395	430	615	750
2035-36	120	200	415	415	450	650	790
2036-37	130	210	435	435	475	685	830
2037-38	135	220	460	460	500	720	875
2038-39	145	230	485	485	525	760	925
2039-40	150	245	510	510	555	800	970
2040-41	160	255	535	535	585	840	1025
2041-42	165	270	565	565	615	885	1080
2042-43	175	285	595	595	650	935	1140
2043-44	185	300	630	630	685	985	1200
2044-45	195	315	665	665	725	1040	1265
2045-46	205	335	700	700	765	1095	1335
2046-47	220	350	735	735	805	1155	1410
2047-48	230	370	780	780	850	1220	1485
2048-49	245	390	820	820	895	1285	1565

Table 7-5 : Toll Rates for Return Journey @ Km 125.000

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	130	215	445	445	485	700	850
2024-25	135	220	455	455	500	715	870
2025-26	140	230	480	480	525	750	915
2026-27	150	240	505	505	550	790	960
2027-28	155	255	530	530	580	830	1010
2028-29	165	265	555	555	605	875	1060
2029-30	175	280	585	585	640	915	1115
2030-31	180	295	615	615	670	965	1175
2031-32	190	310	645	645	705	1015	1235
2032-33	200	325	680	680	740	1065	1300
2033-34	210	340	715	715	780	1120	1365
2034-35	225	360	755	755	820	1180	1440
2035-36	235	380	795	795	865	1245	1515
2036-37	245	400	835	835	910	1310	1595
2037-38	260	420	880	880	960	1380	1680
2038-39	275	440	925	925	1010	1450	1765
2039-40	290	465	975	975	1065	1530	1860
2040-41	305	490	1030	1030	1120	1610	1960
2041-42	320	515	1085	1085	1180	1700	2065
2042-43	335	545	1140	1140	1245	1790	2180
2043-44	355	575	1205	1205	1315	1885	2300
2044-45	375	605	1270	1270	1385	1990	2425
2045-46	395	640	1340	1340	1460	2100	2555
2046-47	415	675	1410	1410	1540	2215	2695
2047-48	440	710	1490	1490	1625	2335	2845
2048-49	465	750	1570	1570	1715	2465	3000

Table 7-6 : Toll Rates for Return Journey @ Km 171.00

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	180	290	600	600	655	945	1150
2024-25	180	295	615	615	675	970	1180
2025-26	190	310	650	650	705	1015	1240
2026-27	200	325	680	680	745	1070	1300
2027-28	210	340	715	715	780	1120	1365
2028-29	220	360	750	750	820	1180	1435
2029-30	235	375	790	790	865	1240	1510
2030-31	245	395	830	830	905	1305	1585
2031-32	260	415	875	875	955	1370	1670
2032-33	270	440	920	920	1005	1440	1755
2033-34	285	460	970	970	1055	1520	1845
2034-35	300	485	1020	1020	1110	1595	1945
2035-36	315	510	1070	1070	1170	1680	2045
2036-37	335	540	1130	1130	1230	1770	2155
2037-38	350	565	1190	1190	1295	1865	2270
2038-39	370	595	1250	1250	1365	1965	2390
2039-40	390	630	1320	1320	1440	2070	2515
2040-41	410	665	1390	1390	1515	2180	2650

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2041-42	435	700	1465	1465	1595	2295	2795
2042-43	455	735	1545	1545	1685	2420	2945
2043-44	480	775	1625	1625	1775	2550	3105
2044-45	505	820	1715	1715	1870	2690	3275
2045-46	535	865	1810	1810	1975	2840	3455
2046-47	565	910	1910	1910	2080	2995	3645
2047-48	595	960	2015	2015	2195	3160	3845
2048-49	630	1015	2125	2125	2320	3330	4055

Table 7-7 : Toll Rates for Return Journey @ Km 212.00

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	105	165	350	350	380	545	665
2024-25	105	170	360	360	390	560	685
2025-26	110	180	375	375	410	590	715
2026-27	115	190	395	395	430	620	755
2027-28	125	200	415	415	455	650	790
2028-29	130	210	435	435	475	685	830
2029-30	135	220	460	460	500	720	875
2030-31	140	230	480	480	525	755	920
2031-32	150	240	505	505	555	795	965
2032-33	155	255	535	535	580	835	1020
2033-34	165	270	560	560	610	880	1070
2034-35	175	280	590	590	645	925	1125
2035-36	185	295	620	620	680	975	1185
2036-37	195	310	655	655	715	1025	1250
2037-38	205	330	690	690	750	1080	1315
2038-39	215	345	725	725	790	1135	1385
2039-40	225	365	765	765	835	1200	1460
2040-41	240	385	805	805	880	1260	1535
2041-42	250	405	850	850	925	1330	1620
2042-43	265	425	895	895	975	1400	1705
2043-44	280	450	945	945	1030	1480	1800
2044-45	295	475	995	995	1085	1560	1900
2045-46	310	500	1050	1050	1145	1645	2000
2046-47	325	530	1105	1105	1205	1735	2110
2047-48	345	555	1165	1165	1275	1830	2230
2048-49	365	590	1230	1230	1345	1930	2350

Table 7-8 : Toll Rates for Monthly Pass Local @ Km 125.000

Year	Car	Minibus /LCV
2023-24	330	330
2024-25	340	340
2025-26	360	360
2026-27	375	375
2027-28	395	395

Year	Car	Minibus /LCV
2028-29	415	415
2029-30	435	435
2030-31	460	460
2031-32	485	485
2032-33	510	510
2033-34	535	535
2034-35	565	565
2035-36	590	590
2036-37	625	625
2037-38	655	655
2038-39	690	690
2039-40	730	730
2040-41	770	770
2041-42	810	810
2042-43	855	855
2043-44	900	900
2044-45	950	950
2045-46	1000	1000
2046-47	1055	1055
2047-48	1115	1115
2048-49	1175	1175

Table 7-9 : Toll Rates for Monthly Pass Local @ Km 171.000

Year	Car	Minibus /LCV
2023-24	330	330
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845
2043-44	890	890
2044-45	940	940
2045-46	990	990
2046-47	1045	1045

Year	Car	Minibus /LCV
2047-48	1105	1105
2048-49	1165	1165

Table 7-10 : Toll Rates for Monthly Pass Local @ Km 212.000

Year	Car	Minibus /LCV
2023-24	330	330
2024-25	340	340
2025-26	355	355
2026-27	375	375
2027-28	390	390
2028-29	410	410
2029-30	435	435
2030-31	455	455
2031-32	480	480
2032-33	505	505
2033-34	530	530
2034-35	560	560
2035-36	585	585
2036-37	620	620
2037-38	650	650
2038-39	685	685
2039-40	720	720
2040-41	760	760
2041-42	800	800
2042-43	845	845
2043-44	890	890
2044-45	940	940
2045-46	990	990
2046-47	1045	1045
2047-48	1105	1105
2048-49	1165	1165

Table 7-11 : Toll Rates for Monthly Pass @ Km 125.000

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	2925	4725	9900	9900	10805	15530	18905
2024-25	3000	4845	10145	10145	11070	15915	19370
2025-26	3150	5085	10660	10660	11625	16715	20350
2026-27	3310	5345	11195	11195	12215	17560	21375
2027-28	3475	5615	11765	11765	12835	18450	22460
2028-29	3655	5900	12365	12365	13490	19390	23605
2029-30	3840	6205	13000	13000	14180	20385	24815
2030-31	4040	6525	13665	13665	14910	21435	26090
2031-32	4245	6860	14375	14375	15680	22540	27440
2032-33	4465	7215	15120	15120	16495	23710	28865
2033-34	4700	7590	15905	15905	17350	24945	30365
2034-35	4945	7990	16740	16740	18260	26250	31955

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	2925	4725	9900	9900	10805	15530	18905
2035-36	5205	8410	17620	17620	19220	27630	33635
2036-37	5480	8855	18550	18550	20235	29085	35410
2037-38	5770	9320	19530	19530	21310	30630	37290
2038-39	6080	9820	20570	20570	22440	32260	39275
2039-40	6405	10345	21670	21670	23640	33985	41375
2040-41	6745	10900	22835	22835	24910	35810	43595
2041-42	7110	11485	24065	24065	26255	37740	45940
2042-43	7495	12105	25365	25365	27675	39780	48425
2043-44	7900	12765	26745	26745	29175	41940	51055
2044-45	8330	13460	28200	28200	30765	44225	53840
2045-46	8790	14195	29745	29745	32445	46645	56785
2046-47	9270	14975	31375	31375	34230	49200	59900
2047-48	9780	15800	33105	33105	36110	51910	63195
2048-49	10320	16670	34930	34930	38105	54775	66685

Table 7-12 : Toll Rates for Monthly Pass @ Km 171.00

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	3955	6390	13390	13390	14605	20995	25560
2024-25	4055	6545	13720	13720	14965	21515	26190
2025-26	4255	6875	14410	14410	15720	22595	27510
2026-27	4475	7225	15140	15140	16515	23740	28900
2027-28	4700	7590	15905	15905	17355	24945	30365
2028-29	4940	7980	16720	16720	18235	26215	31915
2029-30	5190	8385	17575	17575	19170	27560	33550
2030-31	5460	8820	18475	18475	20155	28975	35275
2031-32	5740	9275	19430	19430	21200	30470	37095
2032-33	6040	9755	20440	20440	22295	32055	39020
2033-34	6355	10265	21505	21505	23460	33725	41055
2034-35	6685	10800	22630	22630	24685	35485	43200
2035-36	7035	11370	23820	23820	25985	37355	45475
2036-37	7410	11970	25075	25075	27355	39325	47875
2037-38	7800	12605	26405	26405	28805	41410	50410
2038-39	8215	13275	27810	27810	30340	43615	53095
2039-40	8655	13985	29300	29300	31960	45945	55935
2040-41	9120	14735	30870	30870	33675	48410	58935
2041-42	9610	15530	32535	32535	35490	51020	62110
2042-43	10130	16370	34295	34295	37410	53780	65470
2043-44	10680	17255	36155	36155	39445	56700	69025
2044-45	11265	18195	38125	38125	41590	59790	72785
2045-46	11880	19190	40210	40210	43865	63060	76765
2046-47	12530	20245	42415	42415	46275	66520	80980
2047-48	13220	21360	44750	44750	48820	70180	85435
2048-49	13950	22540	47225	47225	51515	74055	90155

Table 7-13 : Toll Rates for Monthly Pass @ Km 212.00

Year	Car	Minibus /LCV	Bus	Truck	3 - Axle	Multi axle	Oversized Vehicles
2023-24	2290	3705	7760	7760	8465	12165	14810
2024-25	2350	3795	7950	7950	8675	12465	15175
2025-26	2465	3985	8350	8350	9110	13095	15940
2026-27	2590	4185	8770	8770	9570	13755	16745
2027-28	2725	4400	9220	9220	10055	14455	17600
2028-29	2860	4625	9690	9690	10570	15190	18495
2029-30	3010	4860	10185	10185	11110	15970	19440
2030-31	3165	5110	10705	10705	11680	16790	20440
2031-32	3325	5375	11260	11260	12285	17660	21495
2032-33	3500	5655	11845	11845	12920	18575	22610
2033-34	3680	5950	12460	12460	13595	19540	23790
2034-35	3875	6260	13115	13115	14305	20565	25035
2035-36	4080	6590	13805	13805	15060	21645	26350
2036-37	4295	6935	14530	14530	15855	22790	27745
2037-38	4520	7305	15300	15300	16695	23995	29215
2038-39	4760	7690	16115	16115	17580	25275	30770
2039-40	5015	8105	16980	16980	18520	26625	32415
2040-41	5285	8540	17890	17890	19515	28055	34155
2041-42	5570	9000	18855	18855	20570	29565	35995
2042-43	5870	9485	19875	19875	21680	31165	37940
2043-44	6190	10000	20950	20950	22855	32855	40000
2044-45	6530	10545	22095	22095	24105	34650	42180
2045-46	6885	11120	23300	23300	25420	36540	44485
2046-47	7265	11730	24580	24580	26815	38545	46925
2047-48	7660	12380	25935	25935	28290	40670	49510
2048-49	8085	13060	27365	27365	29855	42915	52245

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenario at each of the toll plaza up to 2048-49 starting from the year 2022-23 are shown in tables below.

Table 7-14 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP-2	TP-3	Total
2023-24	48.14	59.49	42.01	**149.64**
2024-25	51.14	63.00	44.56	**158.70**
2025-26	56.03	69.33	48.85	**174.21**
2026-27	61.36	75.58	53.45	**190.40**
2027-28	67.43	82.93	58.37	**208.73**
2028-29	73.40	90.52	63.59	**227.51**
2029-30	80.37	99.04	69.73	**249.14**
2030-31	87.59	108.39	75.96	**271.93**
2031-32	95.63	118.55	83.37	**297.56**
2032-33	104.68	128.94	90.43	**324.05**
2033-34	114.24	141.04	98.99	**354.28**
2034-35	125.29	154.24	108.12	**387.64**
2035-36	136.79	168.57	118.36	**423.73**
2036-37	148.96	183.67	129.33	**461.96**
2037-38	162.97	200.66	140.79	**504.43**
2038-39	177.41	219.27	154.08	**550.77**
2039-40	194.40	240.62	168.22	**603.24**
2040-41	211.36	261.45	183.07	**655.88**
2041-42	231.16	285.78	198.77	**715.71**
2042-43	251.96	311.56	217.44	**780.96**
2043-44	275.49	340.56	238.10	**854.15**
2044-45	300.33	371.30	259.33	**930.96**
2045-46	327.77	404.01	282.06	**1013.84**
2046-47	357.08	440.89	307.68	**1105.66**
2047-48	390.77	480.59	287.69	**1159.06**
2048-49	425.16	524.96	314.79	**1264.91**

Table 7-15 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP-2	TP-3	Total
2023-24	48.14	59.49	42.01	**149.64**
2024-25	50.91	62.68	44.36	**157.95**
2025-26	55.52	68.59	48.41	**172.52**
2026-27	60.53	74.43	52.70	**187.66**
2027-28	66.22	81.28	57.29	**204.79**
2028-29	71.75	88.28	62.12	**222.15**
2029-30	78.20	96.14	67.78	**242.12**
2030-31	84.87	104.70	73.49	**263.06**
2031-32	92.22	113.94	80.28	**286.43**
2032-33	100.47	123.35	86.64	**310.46**
2033-34	109.17	134.26	94.37	**337.79**
2034-35	119.20	146.12	102.58	**367.90**
2035-36	129.56	158.93	111.74	**400.23**
2036-37	140.48	172.33	121.49	**434.30**
2037-38	153.01	187.32	131.65	**471.97**
2038-39	165.72	203.62	143.40	**512.73**

Year	TP-1	TP-2	TP-3	Total
2039-40	180.68	222.30	155.79	**558.76**
2040-41	195.46	240.35	168.79	**604.60**
2041-42	212.69	261.42	182.35	**656.46**
2042-43	230.70	283.57	198.46	**712.73**
2043-44	251.08	308.48	216.27	**775.84**
2044-45	272.34	334.73	234.41	**841.47**
2045-46	295.75	362.45	253.74	**911.93**
2046-47	320.59	393.66	275.47	**989.72**
2047-48	349.12	426.98	256.39	**1032.50**
2048-49	378.00	464.16	279.21	**1121.37**

Table 7-16 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	TP-2	TP-3	Total
2023-24	48.14	59.49	42.01	**149.64**
2024-25	51.03	62.84	44.47	**158.35**
2025-26	55.77	68.94	48.66	**173.37**
2026-27	60.93	74.97	53.11	**189.00**
2027-28	66.80	82.06	57.84	**206.70**
2028-29	72.57	89.35	62.84	**224.75**
2029-30	79.26	97.56	68.74	**245.55**
2030-31	86.22	106.46	74.70	**267.38**
2031-32	93.94	116.14	81.80	**291.88**
2032-33	102.56	126.01	88.49	**317.06**
2033-34	111.66	137.50	96.63	**345.79**
2034-35	122.20	149.98	105.29	**377.47**
2035-36	133.12	163.48	114.97	**411.57**
2036-37	144.65	177.69	125.36	**447.70**
2037-38	157.92	193.57	136.17	**487.66**
2038-39	171.50	210.91	148.70	**531.10**
2039-40	187.40	230.87	161.92	**580.20**
2040-41	203.29	250.17	175.82	**629.28**
2041-42	221.74	272.67	190.39	**684.80**
2042-43	241.08	296.48	207.68	**745.24**
2043-44	262.98	323.32	226.80	**813.10**
2044-45	286.00	351.81	246.35	**884.15**
2045-46	311.31	381.84	267.24	**960.39**
2046-47	338.32	415.81	290.73	**1044.86**
2047-48	369.34	452.25	271.16	**1092.75**
2048-49	400.97	492.83	295.98	**1189.77**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Kaithal to Rajasthan Border section of NH-152/65 in state of Haryana from km 33.250 to km 241.580 has been widened to four lanes. The road is in sound condition and serves healthy traffic volumes. Project corridor has potential to develop as main link for traffic from Punjab, Haryana, and parts of Himachal to Rajasthan and south. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study.

a) There is good amount of tollable traffic running on project.

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy.

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road.

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

GMD Consultants
503-504, Mayuresh Chambers Premises, Plot No. 60,
Sector -11, CBD Belapur, Navi Mumbai. 400 614.
Maharashtra.
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Email : info@gmdconsultants.in
Web : www.gmdconsultants.in

ANNEXURE B

TOT-12 AND TOT-13 VALUATION REPORTS

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Security Cover

Valuation Report

—

March 2024

KPMG

IRB Infrastructure Trust

Valuation of IRB Gwalior Tollway Private Limited

Valuation Report

—

March 2024

KPMG Valuation Services LLP
2nd Floor, Block T2 (B Wing),
Lodha Excelus
Apollo Mills Compound
N.M. Joshi Marg, Mahalakshmi
Mumbai – 400 011, India
Telephone: +91 22 3989 6000

Strictly private and confidential

08 March 2024

IRB Infrastructure Trust
1101, Hiranandani Knowledge Park,
Technology Street, Hill Side Avenue,
Powai, Mumbai – 400 076

Dear Sir,

Valuation Report ("Valuation Report")

This is in accordance with the terms of reference set out in our Letter of Engagement dated 16 October 2023 along with Addendum to the letter of engagement dated 01st March 2024 (together referred as "LoE"), wherein KPMG Valuation Services LLP (hereinafter referred to as the "KPMG " or "Us" or "We") has been appointed by IRB Infrastructure Trust ("the Client", or "IRBI Trust/Trust", or "the Company" or "You") in relation to carrying out Equity Valuation of IRB Gwalior Tollway Private Limited ("SPV" or "IGTPL" or "Target") as on the agreed date of the valuation for the proposed rights issue. The valuation is to be conducted in accordance with Regulation 21 of the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 ("SEBI InvIT Regulations") where valuation is required to be conducted by a registered valuer (as defined under section 247 of the Companies Act, 2013) and such valuation report ("Report") is required to be in compliance with the SEBI InvIT Regulations ("Engagement").

KPMG is appointed as a registered valuer for the purpose of the Engagement (Registered valuer entity under Companies (Registered Valuers and Valuation) Rules, 2017 having IBBI Registration No. IBBI/RV-E/06/2020/115).

The date for the valuation is 31 January 2024 ("Valuation Date").

We hereby enclose our Valuation Report dated 08 March 2024. This is our deliverable and sets out KPMG's conclusions on the valuation of the Target and has been prepared in accordance with the LoE as of Valuation Date. The report is based on the information provided to KPMG by the management of the Target ("Management").

The Valuation Report is confidential to the Client and will be used by the Client only for the purpose, as indicated in this Report, for which we have been appointed. The results of our valuation analysis and our Report cannot be used or relied by the Client for any other purpose or by any other party for any other purpose whatsoever.

The Valuation Report is issued by us on the express understanding that it shall not be copied, disclosed or circulated or referred to in correspondence or in discussion with any third party or used for any other purpose without KPMG's prior written consent. We are aware that the Report may have to be shared with certain regulatory authorities in India and stock exchanges in India and therefore Report may enter the public domain and hereby provide our consent to such sharing. It is clarified that reference to this valuation Report in any document and/ or filing with aforementioned regulatory authorities/ stock exchanges in India, shall not be deemed to be an acceptance by the Valuer of any responsibility or liability to any person/ party other than the Client.

We will not, pursuant to the Letter of Engagement, perform any management functions for You, nor make any decisions. You are responsible for making management decisions, including accepting responsibility for the results.

The Valuation Report does not constitute an offer or invitation to any section of the public to subscribe for or purchase any securities in, or the other business or assets or liabilities of the Target or Client. This letter forms an integral part of the Valuation Report and should be read in conjunction with the Valuation Report enclosed herein.

For KPMG Valuation Services LLP

Yours faithfully

Amit Jain
IBBI Registered Valuer
RV No- IBBI/RV/06/2018/10501

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Glossary

%	Percentage
A	Actual
Adj.	Adjusted
B	Budgeted
bn	Billion
CAGR	Compounded Annual Growth Rate
Capex	Capital Expenditure
CoCo	Comparable Companies
COD	Commercial operation date
CoTrans	Comparable Transactions
Cr	Crore
CWIP	Capital Work In Progress
DBFOT	Design, Build, Finance, Operate and Transfer
DCF	Discounted Cash Flow
EBIT	Earnings Before Interest and Tax
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortization
EV	Enterprise Value
FCFF	Free Cash Flows to Firm
FV	Fair Value
FY	Financial Year
IBEF	India Brand Equity Foundation
IGTPL	IRB Gwalior Tollway Private Limited
IMF	International Monetary Fund
INR	Indian Rupee
InvIT	Investment Trust
k	Thousands
Kd	Cost of Debt
Ke	Cost of Equity
Km	Kilometer
KPMG	KPMG Valuation Services LLP
LoE	Letter of Engagement
Management	Management of Target
MAT	Minimum Alternate Tax
mn	Million
MoRTH	The Ministry of Road Transport and Highways
n.a.	Not applicable
n.m.	No Meaningful Figure
NA	Not applicable
NAV	Net Asset Value
NHAI	National Highways Authority of India
NHIDCL	National Highway and Infrastructure Development Corporation Limited
NWC	Net Working Capital
O&M	Operation and Maintenance
PAT	Profit After Tax
PBT	Profit Before Tax
PIB	Press Information Bureau
PV	Present Value
R(f)	Risk free rate of Return
R(m)	Market rate of Return
Rf	Risk-free Rate
SEBI	Securities and Exchange Board of India
Sponsor	IRB Infrastructure Developers Limited
SPV	Special Purpose Vehicle
Valuation Date	31 January 2024
WACC	Weighted Average Cost Of Capital
WPI	Wholesale Price Index
y-o-y	Year on year
YTD	Year to date

Contents

1.

Executive Summary

Overview

Terms of the Engagement

- We have been appointed by IRBI Trust to undertake Equity Valuation of IRB Gwalior Tollway Private Limited ("IGTPL" or "Target")
- The Valuation shall be undertaken in accordance with Regulation 21 of the SEBI InvIT Regulations where valuation is required to be conducted by a registered valuer and such valuation report is required to be in compliance with the SEBI InvIT Regulations.
- As per the LoE, the valuation is to be carried out as on 31 January 2024. This report has been prepared by KPMG pursuant to terms of LoE.

IRBI Trust Overview

- IRB Infrastructure Developers Limited ("IRBIDL" or "sponsor") is one of the largest infrastructure development and construction companies in India in the roads and highways sector. It was incorporated on 27 July 1998 and is based in Mumbai, India.
- The object and purpose of IRBI Trust is to carry on the activity of an infrastructure investment trust under the InvIT regulations. Investment by IRBI Trust shall only be in holding companies, SPVs, infrastructure projects, securities in India or other permitted investments in accordance with the InvIT regulations, the investment strategy and IRBI Trust documents.
- IRBI Trust is held by IRBIDL as sponsor with 51% stake and remaining 49% stake is held by GIC through its affiliates.
- We understand that IRBI Trust is contemplating a rights issue, to fund the upfront fee payments of three new road projects, including the Target.
- As of 31st January 2024, IRBI Trust owns stake in 15 SPVs, including the Target.

SPV Overview

- IRBI Trust has acquired Toll, Operate and Transfer ("TOT") rights from the NHAI to operate Gwalior – Jhansi section from 16.0 km to 98.5 km of NH75 stretching across Madhya Pradesh and Uttar Pradesh, for an upfront concession fee of INR 1,161 crores.
- The concession agreement for the project was executed between IRBI Trust and NHAI on 12th January 2024.
- For the duration of the concession period, the SPV is required to maintain and operate the tollway and carry out repair and refurbishment whenever required.

Valuation Approach and Methodology

Approach	Method
Income Approach	Discounted Cash Flow Method (DCF)

Source(s): Management information, IRBI Trust website, KPMG Analysis

Valuation Conclusion

Equity Value of Target

Valuation conclusion	
INR Crores	
Present value of cash flows	90
Enterprise Valuation	**90**
Add: Net Cash/ Debt	-
Equity Valuation	**90**

The Enterprise Value of the IGTPL is INR 90 crores. As represented by the Management, there is no surplus cash or debt outstanding as on Valuation Date. Hence, the 100% Equity Value of IGTPL is estimated to be INR 90 crores as on 31 January 2024.

Source(s): Management information, KPMG analysis

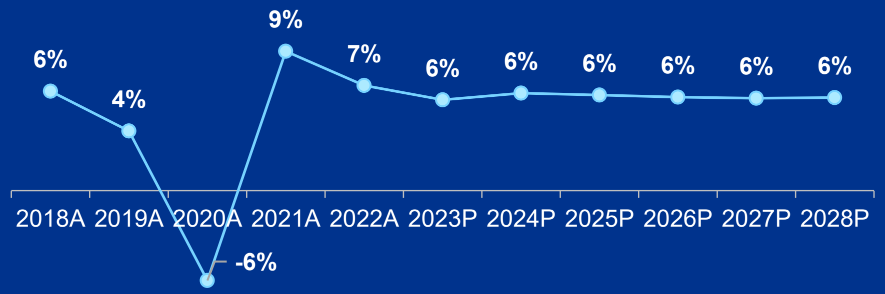
2.

Industry Overview

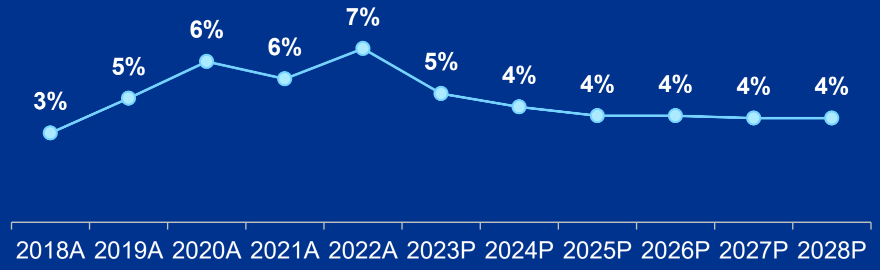
Indian Economy Outlook

Strong economic growth in the first quarter of 2023 helped India overcome the UK to become the fifth-largest economy after it recovered from the COVID-19 pandemic shock. Also, according to IMF economic outlook, India continues to be the fastest-growing economy in the world.

Real GDP growth rate (%)



Annual percentage changes of average consumer prices (%)

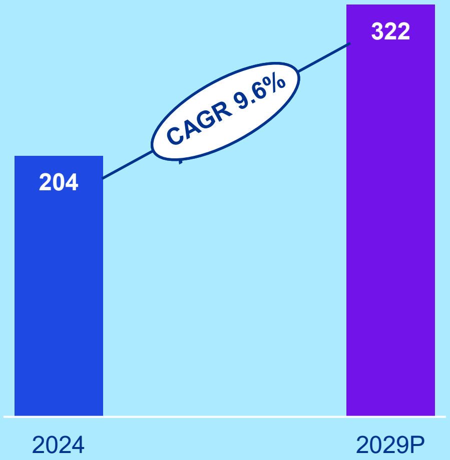


Infra Sector

Infrastructure is a key enabler in helping India become a USD 26 trillion economy by 2047. The government has announced a strong pipeline of infra projects across sectors.

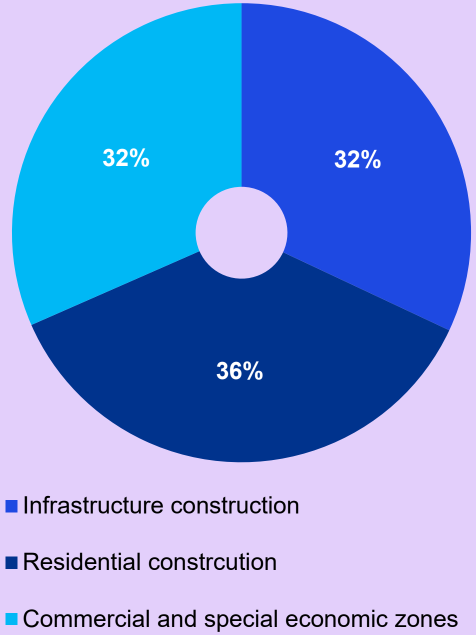
Capital investment outlay for infrastructure is being increased by 33 per cent, which would be 3.3 per cent of GDP and almost three times the outlay in 2019-20.

India Infrastructure market (USD billion)



Construction Industry

Market segmentation of India's Construction industry (2022)



Source(s): International Monetary Fund ("IMF"), India Brand Equity Foundation ("IBEF"), Modor intelligence, EMIS

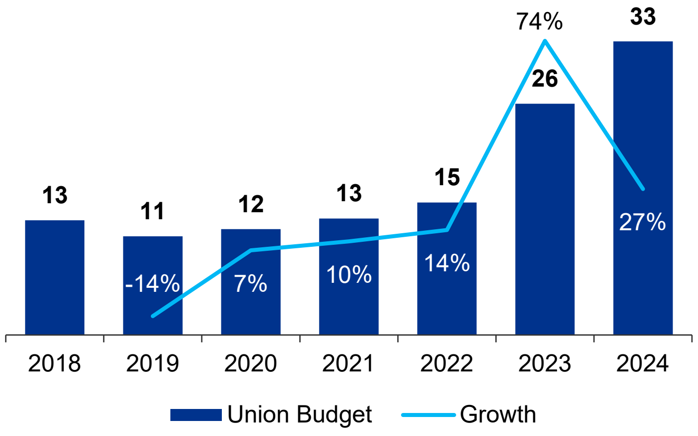
Road Transport and Highways

Road Transport and Highways sector

- The Ministry of Road Transport and Highways ("MoRTH") formulates and administers policies for road transport, national highways and transport research. It is also involved with the construction and maintenance of the National Highways ("NHs") through the National Highways Authority of India ("NHAI"), and the National Highway and Infrastructure Development Corporation Limited ("NHIDCL"). NHAI is an agency of MoRTH which is also responsible for the toll collection on several highways.

- The Union Budget 2023-24 underscored the central government's focus on infrastructure development in India with a big increase in infrastructure spending.

Outlay for Roads under the Union Budget (USD billion)



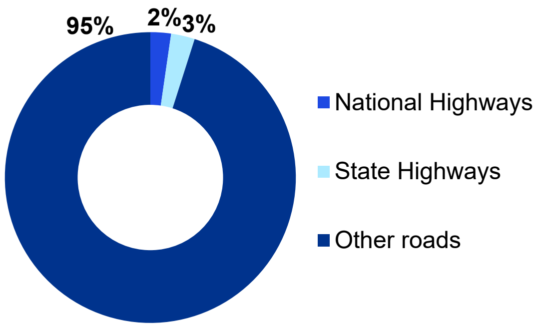
**2023 data is as of 30 December 2022*

Source(s): MoRTH, IBEF, Invest India

2nd

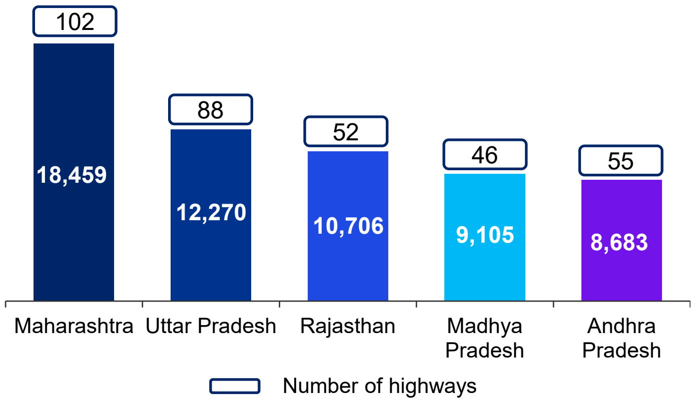
India has the second largest road network in the world of about 67 lakh km. This comprises National Highways, Expressways, State Highways, District Roads, Other District Roads and Village Roads.

Road & Highway – classification breakup



As per the data from Ministry of Road Transport and Highways, National Highways (NHs) make up for about 2.2 per cent (1,46,145 km) of the total road network of India (66,71,083 km).

Top 5 states by length of NHs in India (Km)



National Highways carry over 40 per cent of the total traffic across the length and breadth of the country. Maharashtra has the largest network of National Highways with 18,459 km (12.7%). As per MoRTH, there are 962 highways in India.

(State-wise split is as per Dec 2022)

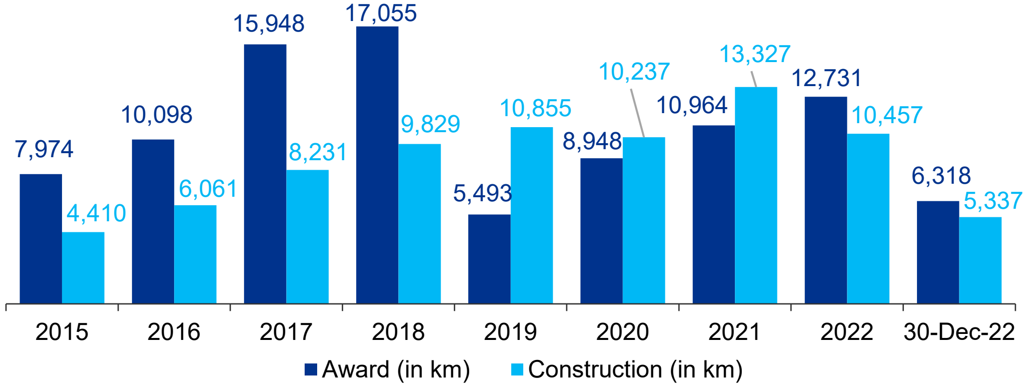
36.2%

The market for roads and highways in India is projected to grow at a CAGR of 36.2 per cent during 2016-2025, on account of growing government initiatives to improve transportation infrastructure in the country.

Key drivers of the sector

Pace of length of highways awarded and constructed (in kms)

The awarding of projects has picked up pace after the sanction of ambitious Bharatmala programme. The Government of India has allocated INR 1.9 lakh crore under the National Infrastructure Pipeline for 2025. The government also aims to construct 23 new national highways by 2025.



13%
2015-2023
CAGR - Length of highways constructed

1.3
2030
Estimated toll collection (in INR lakh crore)

14k
2024
Road construction target (in km)

40 km
2024
Estimated road constructed per day

Source(s): MoRTH, Press Information Bureau ("PIB"), RTO Care, Money control

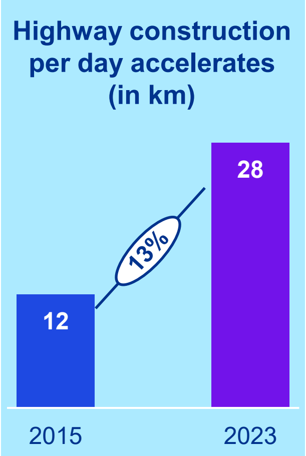
Toll operations efficiency increased due to adoption and growth of FASTag

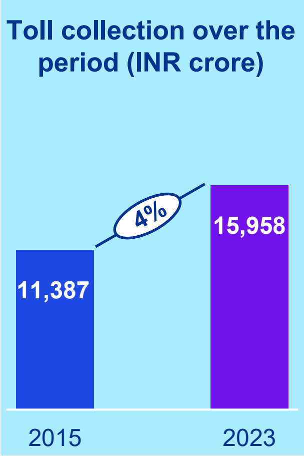
7.9 Cr

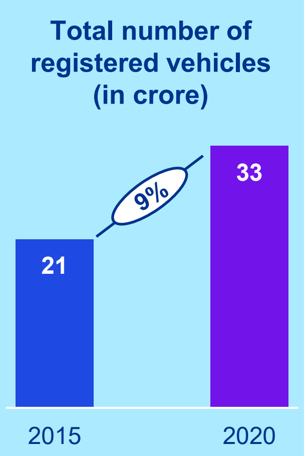
As of 30th November 2023, banks have issued over 7.9 crore FASTags with an average daily ETC transactions of 86.6 lakhs.

147 Cr

The average daily collection via FASTag on NH fee plaza is INR 147.3 crore thereby increasing efficiency in toll operations.







2023 data is as of 05 January 2024

- CAGR

Government has implemented multiple initiatives in the last 9 years to augment the capacity of the National Highway infrastructure in the country. The pace of National Highways construction has increased consistently between 2014-15 and 2022-23 due to the systematic push through corridor-based National Highway development approach.

Financing in road infrastructure

Financing infrastructure

Investment in road infrastructure is long-term and returns are seen several years after construction. Roads and highways are financed through Government and private sources. Funding from Government sources includes budgetary allocations.

Private financing

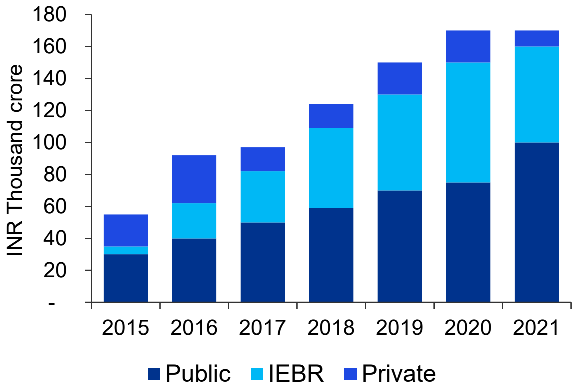
Under private financing, the private developer builds a road, and in return has the right to collect toll for a specified period of time. The developer is responsible for the maintenance of roads during this period.

Public financing

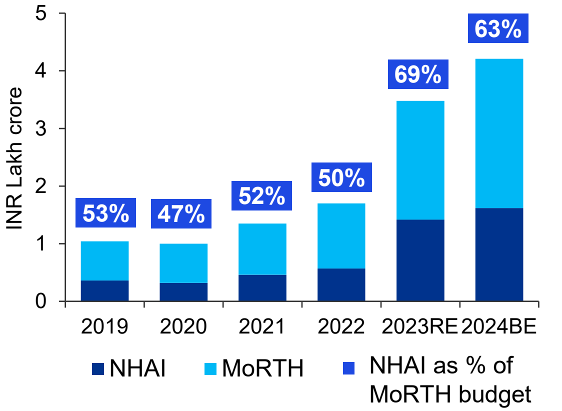
Funding from government sources includes budgetary allocations, which are financed from taxes, cesses, or dedicated road funds. Publicly funded projects are usually given to contractors under various contract models such as the Engineering Procurement Construction (EPC).

Financing in road sector & MoRTH, NHAI budget

Investment sources (Public, Private or Internal and Extra-Budgetary Resources) for road construction projects over the past six years.



With the high share of NHAI funding in MoRTH budget, NHAI is expected to account for 5k - 5.5k km in this fiscal and 5.8k - 6.2k km in the next.



Investment Opportunities in Roads & Highways

5,954	2568	701	392
Projects	**Promoters**	**District**	**Opportunity (USD billion)**

Types of projects awarded by NHAI

a. Engineering Procurement & Construction

Under the EPC model, Government pays private players to lay roads. The private player has no role in the road's ownership, toll collection or maintenance.

b. Build Operate Transfer ("BOT")

Private players build, operate and maintain the road for a specified period before transferring the asset back to the Government. The private player arranges all the finances for the project, while collecting toll revenue/ annuity fee from the Government.

c. Hybrid Annuity Model ("HAM")

HAM is a hybrid model, a mix of the EPC and BOT (build, operate, transfer) models. HAM combines EPC (40 per cent) and BOT-Annuity (60 per cent). On behalf of the government, NHAI releases 40 per cent of the total project cost. The balance 60 per cent is arranged by the developer.

Source(s): PRS Legislative research, IBEF, CRISIL, MoRTH, Invest India
RE – Revised estimate, BE – Budgeted estimate

3.

Valuation Methodology and Approach

Valuation Methodology and Approach

Methodology and Approach

Income Approach - DCF

- Historical balance sheet
- Assumptions
- Projected balance sheet
- Projected Capex, working capital
- DCF Analysis
- DCF summary and sensitivities

- Historical income statement
- Revenue and cost projections
- Projected income statement
- Projected free cashflow

Considered

Market Approach

Consider Comparability to Business and Appropriate Multiple

- Comparable Companies Method ("CoCo")
- Comparable Companies Method ("CoCo")
- Market Price Method

Not Considered

Cost Approach

- Net Asset Value ("NAV") Method
- Replacement Cost New
- Market Value of Assets or Realizable Value

Not Considered

The valuation has been performed as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issues by the Institute of Chartered Accountants of India.

Valuation Methodologies - Income Approach

✓

Discounted Cash Flows ("DCF")

- Under a DCF approach, forecast cash flows are discounted back to the present date, generating a net present value for the cash flow stream of the business. A terminal value at the end of the explicit forecast period is then determined and that value is also discounted back to the valuation date to give an overall value for the business.
- A discounted cash flow methodology typically requires the forecast period to be of such a length to enable the business to achieve a stabilized level of earnings, or to be reflective of an entire operation cycle for more cyclical industries.
- The rate at which the future cash flows are discounted ("the discount rate") should reflect not only the time value of money, but also the risk associated with the business' future operations. The discount rate most generally employed is weighted average cost of capital ("WACC"), reflecting an optimal as opposed to actual financing structure.
- In calculating the terminal value, regard must be had to the business' potential for further growth beyond the explicit forecast period. The "constant growth model", which applies an expected constant level of growth to the cash flow forecast in the last year of the forecast period and assumes such growth is achieved in perpetuity, is a common method. These results would be cross-checked, however, for reasonability to implied exit multiples.
- Due to the finite life of the concession period of the Target, we have not computed a terminal value for the valuation of the Target
- The rate at which future cash flows are discounted should reflect not only the time value of the cash flows but also the risk associated with the business' future operations. This means that in order for a DCF to produce a sensible valuation figure, the importance of the quality of the underlying cash flow forecasts is fundamental.
- The DCF approach has been applied in the valuation of the Target.

Valuation Methodologies - Market Approach

Comparable Companies ("CoCo")

- Under comparable companies method, the value of shares / business of a company is determined based on market multiples of publicly traded comparable companies. Although no two companies are entirely alike, the companies selected as comparable companies should be engaged in the same or a similar line of business as the subject company.
- The appropriate multiple is generally based on the performance of listed companies with similar business models and size.
- The CoCo methodology has been not been applied in the valuation of the Target.
- The list of companies in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, comparable companies' method is not considered.

Comparable Transactions ("CoTrans")

- Under comparable transactions method, the value of shares / business of a company is determined based on market multiples of publicly disclosed transactions in the similar space as that of the subject company. Due to different purposes of investments, transaction rationale and synergy benefits, different control premiums and minority discounts are embedded in the transaction values.
- Multiples are generally based on data from recent transactions in a comparable sector, but with appropriate adjustment after consideration has been given to the specific characteristics of the business being valued.
- The list of transactions in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, Therefore, comparable transactions method has not been considered for the valuation of the Target.

Market Price Method

- Under this approach, the value of the business is arrived at considering the market price of the company based on the daily moving averages of the last six-month volume traded weighted average of closing price on the stock exchange where the company's shares are most frequently traded.
- The market price methodology has not been considered in the valuation of the Target as it is not publicly listed or traded on any stock exchange.

Valuation Methodologies – Cost Approach

Net Asset Value (“NAV”) Method	• Under the net asset value approach, total value is based on the sum of net asset value as recorded on the balance sheet. • A net asset methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business. • The net assets methodology has not been considered for the valuation of the Target as the Target is operational and the financials are made on a going concern basis.
Replacement Cost New	• The replacement cost of a business is the cost of acquiring similar assets employed in the business and/or reaching a similar level of development. A purchaser, faced with a build versus buy scenario, may be prepared to pay significantly over and above this cost to obtain advantages including time saved in developing a similar business, and risk of failure. • The replacement cost method quantifies the cost and risk to reach the present stage of development. • This approach is often used for start-up/non-mature technology or biotech businesses. • Hence, the replacement cost method has not been considered.
Market Value of Assets or Realizable Value	• Under the market value methodology, total value is based on the sum of market value of asset value less market value of liabilities plus, the value of intangible assets not recorded on the balance sheet. • This methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business. • Hence, the market value method has not been considered.

KPMG

WACC Analysis

Discount Rate and Terminal Value

Discount rate

In order to determine the discount rate, we have used the WACC methodology as set out below:

WACC = Ke * (E/(D + E)) + Kd * (1-T) * (D/(D + E))

Where:	Ke	=	cost of equity
	E	=	market value of equity
	Kd	=	cost of debt
	D	=	market value of debt
	T	=	corporate taxation rate

The cost of equity is derived using the Capital Asset Pricing Model (“CAPM”) as follows:

	Ke	=	Rf + ß * (Rm – Rf) + α
Where:	Rf	=	the current return on risk-free assets
	Rm market	=	the expected average return of the
	(Rm – Rf)	=	the average risk premium above the risk - free rate that a “market” portfolio of assets is earning
	ß	=	the beta factor, being the measure of the systematic risk of a particular asset relative to the risk of a portfolio of all risky assets
	α	=	company specific risk factor (alpha)

Terminal Value

- Due to the finite life of the concession period of the Target, we have not computed a terminal value for the valuation of the Target.

Summary - WACC

Risk free rate (Rf) 7.2%	• The nominal risk-free rate is based on our understanding of the analysis of 10 year benchmark government of India securities yield as well analysis of the consensus forecast yield.
Equity risk premium 7%	• Equity risk premium is estimated based on KPMG's understanding of prevailing market return in India.
Relevered beta 1.01	• Beta is a measure of the risk of the shares of a company. ß is the co-variance between the return on sample stock and the return on the market. In order to determine the appropriate beta factor for the Company, consideration must be given either to the market beta of the Company or betas of comparable quoted companies. • We have considered companies involved in the road operating industry and infrastructure investment trusts. • Betas are low in this industry due to the stable nature of the road operating industry and low level of cash flow volatility due to the relatively steady usage of roads. Refer annexure 3.
Cost of equity 14.3%	• Based on above parameters cost of equity is 14.3%.
Post Tax Cost of Debt (Kd) **6.5 per cent**	• We have considered the average marginal cost of borrowing of 8.75 per cent as provided by Management. • Based on a Pre-tax cost of debt of 8.75 per cent and tax rate of 25.17 per cent which is the tax rate applicable to the Target. Post-tax cost of debt is arrived at by multiplying pre-tax cost of debt by (1-Tax Rate).
WACC **9.64 per cent**	• Based on our analysis and discussion with management, we have considered a debt-to-equity ratio of 150%. • Considering the above cost of equity of 14.3 per cent, the post-tax cost of debt of 6.5 per cent and the debt-to-equity ratio of 150%, the estimated weighted average cost of capital (WACC) is 9.64 per cent.

Source: KPMG analysis, Capital IQ

4.

Valuation of IGTPL

Overview

Project details

IGTPL is engaged to carry out the operation and maintenance of the Gwalior – Jhansi section on the NH75 in accordance with the concession agreement on a TOT basis. The project stretch is 82.5 kms, 4 lane road stretching between Gwalior and Jhansi.

Concession period

IGTPL is required to operate, manage and maintain, repair or otherwise make improvements to the project highway in accordance with the concession agreement for a period of 20 years commencing from the appointed date. The concession agreement also stipulates that the concession period shall not be reduced by more than 5 years or increased by more than 10 years whatsoever. As per the traffic report, no shortening or extension of concession period is estimated.

Upfront Concession Fee

As per the concession agreement, IGTPL is required to pay INR 1,161 crores as upfront concession fee to NHAI.

Highlights

Particulars	Details
Project location	Gwalior-Jhansi stretch on NH75
Concessionaire	IGTPL
State	Madhya Pradesh and Uttar Pradesh
Tollable length (kms)	82.5
Concession agreement date	12-Jan-24
Expected Appointed date	1-Apr-24
Completion certificate date	NA
Concession Period	20 years from Appointed Date

Shareholding as at 31 January 2024

Particulars	Stake %
IRB Infrastructure Trust	100%

Source(s): Management information

Key Assumptions

a. Modification in concession period

- Article 24 of the concession agreement of IGTPL provides for modification of the concession period.
- As per Article 24.5.1, “in the event Actual Fee I shall have fallen short of or exceeded the Target Fee 1 by more than 20% (twenty percent), then for every 1% (one percent) shortfall or increase as compared to the Target Fee 1, the Concession Period, subject to fulfilment of terms of this Agreement, shall be increased by 1.5% (one and a half percent) or decreased by 0.75% (point seven five percent) thereof; provided that such increase or decrease in Concession Period shall not in any case exceed not more than limits specified in Clause 3.1.”
- As per Article 24.5.2, “in the event Actual Fee 2 shall have fallen short of or exceeded the Target Fee 2 by more than 30% (thirty percent), then for every 1% (one percent) sho1tfall or increase as compared to the Target Fee 2, the Concession Period, subject to fulfilment of terms of this Agreement, shall be increased by 1.5% (one and a half percent) or decreased by 0.75% (point seven five percent) thereof; provided that such increase or decrease in Concession Period shall not in any case exceed not more than limits specified in Clause 3.1.”
- As per the traffic report, revenue variance is estimated to be lower than the caps mentioned above. Thus, there shall be no modification to the concession period in line with the above articles of the concession agreement.
- Management informed us that they are expected to make payment of upfront fee to authority in the fourth week of March 2024, post which they can begin tolling and operations. Thus, Management have assumed appointed date to be 01 April 2024 for IGTPL. We have relied on Management assumption and are considering appointed date as 01 April 2024. Considering the concession period of 20 years, the concession end date has been estimated as 31 March 2044. Thus, the explicit period for the current valuation exercise has been considered to be from 1 February 2024 to 31 March 2044.

b. Traffic volume

- Traffic volume for the forecast period has been considered based on the traffic report prepared by independent consultant in March 2024.

c. Toll rates

- Annual revision of toll rate for the forecast period shall be in accordance with National Highway Fee (Determination of Rates and Collection) Rules, 2008 and amendment thereto. Additionally, the applicable base rate shall be revised annually on April 1 to reflect the increase in wholesale price index (“WPI”) but such revision shall be restricted to 40% of the increase in WPI on overall basis during the concession period. As given in the traffic report, WPI has been projected to grow by 5% initially and stepped down for the future years.

d. Revenue

- Toll revenue has been considered basis the pessimistic scenario from the traffic report prepared by an independent consultant.

e. Periodic maintenance & routine maintenance costs

- Periodic and routine maintenance costs have been considered from a technical feasibility study performed by the Management. Given the technical nature of this study, review of the same is not part of our scope of work. Hence, We have considered the routine and periodic maintenance based on Management representation.

f. Depreciation & amortization

- Forecasted depreciation on assets has been provided by the Management. Management has forecasted depreciation to increase in line with the increase in revenue.

g. Tax

- Management represented that the SPV has adopted the new tax regime. Thus, tax outflows for the forecast have been calculated based on the new regime of income tax.

h. Capex

- Capex is forecasted to be INR 1,249 Cr in FY2024 and FY2025. Management represented that the cost primarily pertains to the upfront concession fee of INR 1,161 crore to be paid by IGTPL to NHAI. The remaining pertains to EPC cost and, preliminary and pre-operative cost.

Source(s): Management information

Valuation of IGTPL

Discounted Cash Flows (1/2)

Discounted Cash Flow											
INR crores		FY2024 2 months	FY2025 12 months	FY2026 12 months	FY2027 12 months	FY2028 12 months	FY2029 12 months	FY2030 12 months	FY2031 12 months	FY2032 12 months	FY2033 12 months
Revenue		-	112	126	139	154	167	182	199	218	238
EBITDA	**[A]**	-	97	110	110	101	109	110	110	180	198
EBITDA margin		0%	86%	87%	79%	66%	65%	61%	55%	82%	83%
Depreciation		-	(24)	(26)	(29)	(32)	(36)	(39)	(42)	(47)	(51)
EBIT		-	73	83	81	69	74	72	68	133	147
EBIT margin		0%	65%	66%	58%	45%	44%	39%	34%	61%	62%
Less: Tax on EBIT	[B]		(9)	(12)	(12)	(10)	(12)	(12)	(12)	(29)	(34)
Change in working capital	[C]	(39)	-	-	-	39	-	-	-	-	-
Less : Capex	[D]	(1,181)	(68)								
Free cash flows to the firm	**E = [A+B+C+D]**	**(1,220)**	**20**	**98**	**98**	**131**	**98**	**98**	**98**	**150**	**164**
Discounting period		0.083	0.667	1.667	2.667	3.667	4.667	5.667	6.667	7.667	8.667
Discount factor	[F]	0.992	0.940	0.858	0.782	0.714	0.651	0.594	0.541	0.494	0.450
Present value of cash flows	**[E*F]**	**(1,211)**	**18**	**84**	**77**	**93**	**63**	**58**	**53**	**74**	**74**

Source(s): Management information, KPMG analysis

Discounted Cash Flows (2/2)

Discounted Cash Flow												
INR crores		FY2034 12 months	FY2035 12 months	FY2036 12 months	FY2037 12 months	FY2038 12 months	FY 2039 12 months	FY2040 12 months	FY2041 12 months	FY2042 12 months	FY2043 12 months	FY2044 12 months
Revenue		259	280	304	327	354	384	414	448	482	522	564
EBITDA	[A]	209	218	240	247	257	335	365	374	394	422	448
EBITDA margin		81%	78%	79%	75%	73%	87%	88%	83%	82%	81%	79%
Depreciation		(55)	(60)	(65)	(70)	(75)	(82)	(88)	(95)	(103)	(111)	(120)
EBIT		154	159	175	177	182	254	276	278	292	311	328
EBIT margin		59%	57%	58%	54%	51%	66%	67%	62%	61%	60%	58%
Less: Tax on EBIT	[B]	(37)	(39)	(45)	(46)	(49)	(69)	(76)	(78)	(84)	(91)	(97)
Change in working capital	[C]	-	-	-	-	-	-	-	-	-	-	-
Less : Capex	[D]											
Free cash flows to the firm	**E = [A+B+C+D]**	**172**	**179**	**195**	**200**	**208**	**267**	**289**	**295**	**311**	**332**	**351**
Discounting period		9.667	10.667	11.667	12.667	13.667	14.667	15.667	16.667	17.667	18.667	19.667
Discount factor	[F]	0.411	0.375	0.342	0.312	0.284	0.259	0.236	0.216	0.197	0.179	0.164
Present value of cash flows	**[E*F]**	**71**	**67**	**67**	**62**	**59**	**69**	**68**	**64**	**61**	**60**	**57**

Source(s): Management information, KPMG analysis

Valuation conclusion	
INR Crores	
Present value of cash flows	90
Present value of release of working capital	-
Enterprise Valuation	**90**

WACC	**9.64%**

Basis the above and using a WACC of 9.64%, the Enterprise Value of IGTPL on 31 January 2024 is INR 90 crore.

Refer page no 22 for detailed WACC analysis

5.

Valuation Conclusion

Valuation Conclusion

Equity Value of Target

Valuation conclusion	
INR Crores	
Present value of cash flows	90
Enterprise Valuation	**90**
Add: Net Cash/ Debt	-
Equity Valuation	**90**

The Enterprise Value of the IGTPL is INR 90 crores. As represented by the Management, there is no surplus cash or debt outstanding as on Valuation Date. Hence, the 100% Equity Value of IGTPL is estimated to be INR 90 crores as on 31 January 2024.

Source(s): Management information, KPMG analysis

6.

Annexures

Annexure 1: Sources of Information

This Report is prepared based on the below sources of information as provided to us by the Management:

The following information provided to KPMG by Management was used in preparation of the Valuation Report:

- Financial projections of IGTPL from 01 February 2024 till the end of the concession period
- Other data for IGTPL which is as follows –
    - Concession Agreement
    - Traffic Report prepared by GMD consultants
- List of approvals, permits, licenses and litigations for IGTPL as at 31 January 2024.
- Management has provided Traffic consultant report prepared by GMD Consultants (appointed independently by Client) dated March 2024 for IGTPL. Management has confirmed that the traffic study shared are the most recent study available. Forecast revenue has been considered from the aforesaid traffic study report for the SPV. We have compared the revenue considered in the forecast model with the revenue forecasted in the traffic study report and noted that the Management has considered the pessimistic revenue scenario in their forecast.
- Management has informed us that as at Valuation Date there are no material balances in the financial statements of IGTPL, as IGTPL was incorporated in January 2024. We have relied on Management representation and are considering NIL assets and liabilities as on Valuation Date.
- Management informed us that they are expected to make payment of upfront fee to authority in the fourth week of March 2024, post which they can begin tolling and operations. Thus, Management have assumed appointed date to be 01 April 2024 for IGTPL. We have relied on Management assumption and considering appointed date as 01 April 2024.
- Management has informed us that routine and periodic maintenance for IGTPL has been considered from a technical feasibility study performed by the Management. Based on article 5 of the concession agreement we understand that O&M obligation for IGTPL will begin from June 2027. Given the technical nature of this study, review of the same is not part of our scope of work. Hence, We have considered the routine and periodic maintenance based on Management representation
- The EPC costs and the preliminary and pre-operative expenses have been provided by the Management.
- Besides the above, there may be other information provided by the Management which may not have been perused by us in any detail, if not considered relevant for our defined scope.
- In addition to the above, we have also obtained such other information and explanations from the Management, either verbally or in written form, as were considered relevant for the purpose of the valuation. We had discussions with the key members of the Management, including Mr. Tushar Kawedia; Ms. Shilpa Todankar; and Mr. Rushabh Gandhi.
- The following external sources were used in the preparation of the report:
    - External databases such as Capital IQ, Mergermarket, etc.
    - Relevant information made available to us by Management at our request.
    - Publicly available information and secondary information.

Annexure 2: Beta Computation

Beta computation 31 January 2024	Market Capitalization	Total Debt	Debt / Equity	Debt / Total Capital	Beta	Tax Rate	Unlevered Beta	Target's Debt Equity	Target's Tax Rate	Re Levered Beta
IRB Infrastructure Developers Limited	279,497	180,906	64.7%	39.3%	1.03	25.17%	0.63	150.0%	25.17%	1.34
PNC Infratech Limited	96,451	70,738	73.3%	42.3%	0.91	25.17%	0.59	150.0%	25.17%	1.24
Dilip Buildcon Limited	56,906	67,629	118.8%	54.3%	1.03	25.17%	0.55	150.0%	25.17%	1.16
Bharat Road Network Limited	5,558	13,693	246.4%	71.1%	1.10	25.17%	0.39	150.0%	25.17%	0.82
National Highways Infra Trust	na	na	na	na	na	na	na	na	na	na
India Infrastructure Trust	na	na	na	na	na	na	na	na	na	na
India Grid Trust	98,821	186,972	189.2%	65.4%	0.42	25.17%	0.17	150.0%	25.17%	0.37
Powergrid Infrastructure Investment Trust	88,963	5,721	6.4%	6.0%	0.43	25.17%	0.41	150.0%	25.17%	0.87
IRB InvIT Fund	40,180	30,380	75.6%	43.1%	0.43	25.17%	0.28	150.0%	25.17%	0.59
G R Infraprojects Limited	107,503	63,080	58.7%	37.0%	0.87	25.17%	0.60	150.0%	25.17%	1.28
Median			74.5%				0.48			**1.01**

Note:
(a) Market capitalization of comparable companies has been considered based on 3-month volume weighted average share prices till 31 January 2024.
(b) Beta has been computed based on 1-year daily average adjusted beta.
(c) Although, National Highway Infra Trust and India Infrastructure Trust are part of our comparable companies set, they has been excluded while calculating the beta due to low trading.

Source(s): KPMG analysis based on data sourced from S&P Capital IQ database.

Annexure 3: Other disclosures as required under SEBI InvIT Regulations

The following disclosures are as at 31 January 2024 for the Target

1. **Valuation of the project in the previous 3 years:** Management has represented that no previous valuation of the project has been undertaken.
2. **List of one-time sanctions/approvals which are obtained or pending/ List of up to date/overdue periodic clearances:** Refer annexure 3a for the aforementioned information.
3. **Estimates of already carried as well as proposed major repairs and improvements along with estimated time of completion:** Refer annexure 3b for the aforementioned information.
4. **Purchase price of the project by the InvIT:** Not Applicable
5. **On-going and closed material litigations including tax disputes in relation to the assets, if any:** Management represented that there are no on-going and closed material litigations in the Target.
6. **Statement of assets**: Management has represented that there are no assets under the Target as on the Valuation Date.
7. **Revenue pendencies including local authority taxes associated with InvIT asset and compounding charges, if any:** Management represented that there are no revenue pendencies including local authority taxes and compounding charges with respect to the Target.
8. **Vulnerability to natural or induced hazards that may not have been covered in town planning/ building control:** Management represented that there are no such natural or induced hazards which have been not considered in town planning/building control with respect to the Target.
9. **Latest pictures of the SPV:** Refer annexure 3c for the aforementioned information.
10. **Date of site inspection**: During the month of February/March 2024.
11. **In term of the SEBI InvIT Regulations, we hereby confirm that:**

- We are competent to undertake the valuation.
- We are independent and have prepared this Report on fair and unbiased basis.
- The Valuation has been performed as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issued by the Institute of Chartered Accountants of India.
- KPMG is not affiliated to the Client in any manner whatsoever. Further KPMG does not have a prospective interest in the Target which is the subject of this Valuation and KPMG's fee is not contingent on an action or event resulting from the analysis, opinions or conclusions in the Valuation.

Caveat to disclosures
KPMG has not independently verified the documents related to disclosures mentioned in the annexures and have relied on Management representation for the same.

Source(s): Management information, KPMG analysis

Annexure 3a: One-time sanctions and approvals and overdue periodic clearances

Sr. No	Description	Remarks
a.	Permission of State Government for extraction of boulder from quarries	Not Applicable
b.	Permission of Village Panchayat and Pollution Control Board for installation of crushers	Not Applicable
c.	License for use of explosives	Not Required
d.	Permission of the State Government for drawing water from river / reservoir	The SPV is in process of identifying land for plant set-up and borrow areas. Once identified,Applicable permits and Clearances shall be obtained
e.	License from Inspector of factories or other Competent Authority for setting up Batching Plant	
f.	Clearance of Pollution Control Board for setting up Batching Plant	
g.	Clearance of Village Panchayat & PCB for Asphalt Plant	
h.	Permission of Village Panchayat and State Government for Borrow Earth	
i.	Permission of State Government for cutting of Trees	Not Required
j.	Any other permits or clearances required under Applicable Laws	Not Applicable

Source(s): Management information

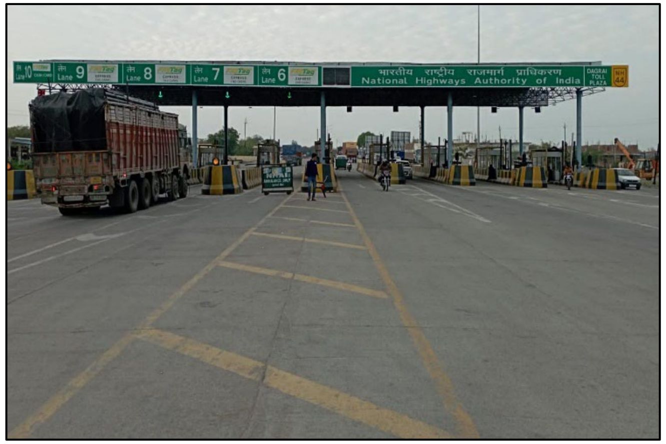
Annexure 3b: Estimates of already carried as well as proposed major repairs and improvements

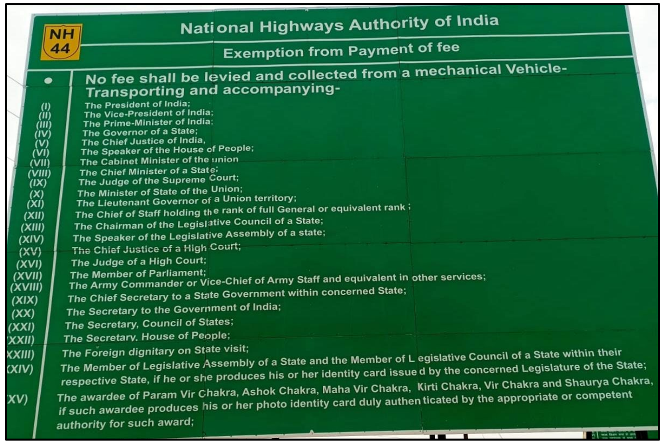
Estimate of already carried out as well as proposed major repairs										
INR Crore										
Name of SPV	**FY2025**	**FY2026**	**FY2027**	**FY2028**	**FY2029**	**FY2030**	**FY2031**	**FY2032**	**FY2033**	**FY2034**
IRB Gwalior Tollway Pvt. Ltd.	0	-	11	22	23	36	52	-	-	11

Estimate of already carried out as well as proposed major repairs										
INR Crore										
Name of SPV	**FY2035**	**FY2036**	**FY2037**	**FY2038**	**FY 2039**	**FY 2040**	**FY2041**	**FY2042**	**FY 2043**	**FY2044**
IRB Gwalior Tollway Pvt. Ltd.	21	22	35	50	-	-	26	38	49	61

Source(s): Management information

Annexure 3c: Site pictures





Source(s): Site visits

7.

Scope & Limitations

Scope & Limitations (1/3)

Terms of Engagement

- KPMG Valuation Services LLP ("KPMG" or "we") has been appointed by IRB Infrastructure Trust ("IRBI Trust", "Trust" or "Client" or "you") in relation to carrying out Equity Valuation of IRB Gwalior Tollway Private Limited ("IGTPL" or "Target") as on the agreed date of the valuation for the proposed rights issue in accordance with Regulation 21 of the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 where valuation is required to be conducted by a registered valuer (as defined under section 247 of the Companies Act, 2013) and such valuation report ("Report") is required to be in compliance with the SEBI InvIT Regulations ("Engagement" or "Valuation").
- The terms of the Engagement are set out in our letter of engagement dated 16 October 2023 along with Addendum to the letter of engagement dated 01 March 2024 (together referred as "LoE").
- The date of Valuation is 31 January 2024 ("Valuation Date").
- This Report sets out KPMG's conclusions on the Valuation and has been prepared in accordance with LoE. Our Report is confidential to the Client and will be used by the Client only for purposes mentioned in the LoE. The Report will be issued by us on the express understanding that it shall not be copied, disclosed or circulated or referred to in correspondence or discussion with any third party. This Report is confidential to the Client and it is given on the express understanding that it is not communicated, in whole or in part, to any third party without KPMG's prior written consent. Neither the Report nor its content may be used for any other purpose without prior written consent of KPMG. This Report has a limited scope as specified in it. KPMG will not accept any responsibilities to any other party to whom the Report may be shown or who may acquire a copy of the Report.
- We are not responsible to any other person/ party for any decision of such person/ party based on this Report. Any person/ party intending to provide finance/ invest in the shares/ businesses of the Target/ their holding companies/ subsidiaries/ group companies, if any, shall do so after seeking their own professional advice and after carrying out their own due diligence procedures to ensure that they are making an informed decision. If any person/ party (other than the Client) chooses to place reliance upon any matters included in the report, they shall do so at their own risk and without recourse to the Valuer. It is hereby notified that usage, reproduction, distribution, circulation, copying or otherwise quoting of this Report or any part thereof, except for the purpose as set out earlier in this report, without our prior written consent, is not permitted, unless there is a statutory or a regulatory requirement to do so.
- We are aware that the Report may have to be shared with certain regulatory authorities in India and stock exchanges in India. We also understand from you that the Report may be included in the offer document for the rights issue and therefore, we understand that the Report may enter public domain and hereby provide our consent to such sharing subject to the following:
  - You shall indemnify and hold us harmless against any loss that may be incurred by us arising out of or relating to sharing of the Report with regulatory authorities in India or stock exchanges in India, or the Report entering the public domain as mentioned herein, as also against all costs, charges and expenses (including legal expenses) suffered or incurred by us on account of the aforesaid. In this clause "us" shall include all Firm Persons and "you" shall include Other Beneficiaries (as these terms have been defined in the LoE).
  - Such Report shall be disclosed in full and strictly in such forms as KPMG has provided to the Client without any deviation.
  - KPMG shall not be liable to any person or party for any reason and under any circumstances.
  - The readers of the Report shall not bring any claim against KPMG for matters arising out of or consequent upon disclosure of the Report.
  - The Report shall be issued with all the disclaimers as provided by KPMG at the time of issuance of the Report.

Scope & Limitations (2/3)

Disclosure of Interest/Conflict

- KPMG is not affiliated to the Client in any manner whatsoever. Further, KPMG does not have a prospective interest in the business which is the subject of this engagement.
- KPMG's fee is not contingent on an action or event resulting from the analyses, opinions or conclusions in this Report.

Basis of Value

- The report has been prepared on the basis of "Fair Value" as at Valuation Date. The generally accepted definition of "Fair Value" is the value as applied between a hypothetical willing vendor and a hypothetical willing prudent buyer in an open market and with access to all relevant information.

Premise of Value

- The report has adopted "Going Concern Value" as the premise of value in the given circumstances. The generally accepted definition of Going concern value is the value of a business enterprise that is expected to continue to operate in the future.
- The valuation has been performed as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issued by the Institute of Chartered Accountants of India.

Scope and Limitations

- This Report is based on the information provided by the Client and has been confirmed by the Client. KPMG have not independently verified or checked the accuracy or timeliness of the same. KPMG have indicated within this Report the sources of the information presented and have satisfied ourselves, so far as possible, that the information presented is consistent with other information which is made available to us in the course of our work in accordance with the terms of this engagement letter. KPMG have not, however, sought to establish the reliability of the sources by reference to other evidence, except as may be specifically agreed in writing between us.
- KPMG has read, analyzed and discussed the financial information and underlying management assumptions pertaining to the Target as provided by the Management of the Client ("Management"). This information has been solely relied upon by KPMG for the Valuation.
- We have based our analysis on the business plan of the Target for the period from 1 February 2024 to the end of the concession periods of the Target as provided by the Management ("Management Business Plan") and key underlying assumptions. Any changes in the assumptions or methodology used to consolidate the financial statements may significantly impact our analysis and therefore the Valuation.
- KPMG has read and analyzed but have not commented on the appropriateness of or independently verified the Management Business Plan and underlying data and assumptions and accordingly provided no opinion on the same. If there were any omissions, inaccuracies or misrepresentations of the information provided by the Management, this may have a material effect on our findings and therefore the Valuation.
- The realization of the projections in the Management Business Plan will be dependent on the continuing validity of assumptions on which it is based. Our analysis therefore will not and cannot be directed to providing any assurance about the achievability of the future plans. Since the projections relate to the future, actual results are likely to be different from the projected results because events and circumstances do not occur as expected and the differences may be material.

Scope & Limitations (3/3)

- This Report makes reference to 'KPMG analysis'. This indicates only that we have (where specified) undertaken certain analytical activities on the underlying data to arrive at the information presented.
- Our work did not constitute an audit of the financial statements and accordingly, we do not express any opinion on the truth and fairness of the financial position as indicated in this Report. Our work did not constitute a validation of the financial statements of the Target, and accordingly, we do not express any opinion on the same.
- We have carried out the Valuation based on Management Business Plan received. Our scope of work does not include any commercial / legal / technical due diligence or carrying out any environmental / technical feasibility analysis or comparison of Management Business Plan with approved budgets / annual operating plans of the Target. We have relied on Management's representation on such considerations and any changes in the same may significantly impact our analysis and therefore the Valuation.
- Wherever applicable, we have relied upon the legal opinion document / affidavit copies provided by Management in relation to the current status of the projects. We have not carried out / sought any independent legal opinion, nor have we verified the accuracy of the legal opinion shared. Any discrepancy in the same may significantly impact our analysis and therefore the Valuation.
- Our opinion is based on prevailing market, economic, and other conditions at the Valuation Date. It should be appreciated that these conditions can change over relatively short periods of time, not only as a result of internal factors, but because of external factors, which could impact the value, either positively or negatively.
- For our analysis, we have relied on published and secondary sources of data, whether or not made available by the Client. We have not independently verified the accuracy or timeliness of the same.
- Neither KPMG nor any of its affiliates worldwide are responsible for updating this Report because of events or transactions occurring subsequent to the date of this Report. Any updates or second opinions in this Report cannot be sought by the Management from external agencies including global offices of KPMG without the prior written permission of KPMG.
- KPMG has not considered any finding made by other external agencies in carrying out the Valuation analysis other than the one mentioned herein.
- For the purpose of the Valuation, our scope does not include valuation or legal due diligence of current assets and liabilities and as represented by the Management, the same has been considered at their respective book value.
- For the purpose of this engagement and Report, we have made no investigation of, and assume no responsibility for the title to, or liabilities against the Target. Our conclusion of value assumes that the title to the assets and liabilities of the Target reflected in the financial statements as on Valuation Date is intact as at the date of this Report.
- Any discrepancies in any table/ annexure between the total and the sums of the amounts listed are due to rounding-off.
- The Report should be read in the light of these limitations, and we caution that had these matters been within the scope of our review, our conclusions may have changed, and that change could be material.
- The information presented in this Report does not reflect the outcome of any due diligence procedures. The reader is cautioned that the outcome of due diligence process could change the information herein and our Valuation, and that change could be material.
- This Report forms an integral whole and cannot be split in parts. The outcome of the Valuation can only lead to proper conclusions if the Report as a whole is taken into account.

Management representation

- This Report is prepared on the basis of the sources of information listed in Annexure 1. KPMG has relied upon written representation by the Management that the information contained in the Report is materially accurate and complete, fair in its manner of portrayal and therefore forms a reliable basis for the Valuation.

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KPMG

Security Cover

Valuation Report

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March 2024

KPMG

IRB Infrastructure Trust

Valuation of IRB Kota Tollway Private Limited

Valuation Report

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March 2024

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Lodha Excelus
Apollo Mills Compound
N.M. Joshi Marg, Mahalakshmi
Mumbai – 400 011, India
Telephone: +91 22 3989 6000

Strictly private and confidential

08 March 2024

IRB Infrastructure Trust
1101, Hiranandani Knowledge Park,
Technology Street, Hill Side Avenue,
Powai, Mumbai – 400 076

Dear Sir,

Valuation Report ("Valuation Report")

This is in accordance with the terms of reference set out in our Letter of Engagement dated 16 October 2023 along with Addendum to the letter of engagement dated 1st March 2024 (together referred as "LoE"), wherein KPMG Valuation Services LLP (hereinafter referred to as the "KPMG " or "Us" or "We") has been appointed by IRB Infrastructure Trust ("the Client", or "IRBI Trust/Trust", or "the Company" or "You") in relation to carrying out Equity Valuation of IRB Kota Tollway Private Limited ("SPV" or "IKTPL" or "Target") as on the agreed date of the valuation for the proposed rights issue. The Valuation is to be conducted in accordance with Regulation 21 of the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 ("SEBI InvIT Regulations") where valuation is required to be conducted by a registered valuer (as defined under section 247 of the Companies Act, 2013) and such valuation report ("Report") is required to be in compliance with the SEBI InvIT Regulations ("Engagement").

KPMG is appointed as a registered valuer for the purpose of the Engagement (Registered valuer entity under Companies (Registered Valuers and Valuation) Rules, 2017 having IBBI Registration No. IBBI/RV-E/06/2020/115).

The date for the valuation is 31 January 2024 ("Valuation Date").

We hereby enclose our Valuation Report dated 08 March 2024. This is our deliverable and sets out KPMG's conclusions on the valuation of the Target and has been prepared in accordance with the LoE as of Valuation Date. The report is based on the information provided to KPMG by the management of the Target ("Management").

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The Valuation Report is confidential to the Client and will be used by the Client only for the purpose, as indicated in this Report, for which we have been appointed. The results of our valuation analysis and our Report cannot be used or relied by the Client for any other purpose or by any other party for any other purpose whatsoever.

The Valuation Report is issued by us on the express understanding that it shall not be copied, disclosed or circulated or referred to in correspondence or in discussion with any third party or used for any other purpose without KPMG's prior written consent. We are aware that the Report may have to be shared with certain regulatory authorities in India and stock exchanges in India and therefore Report may enter the public domain and hereby provide our consent to such sharing. It is clarified that reference to this valuation Report in any document and/ or filing with aforementioned regulatory authorities/ stock exchanges in India, shall not be deemed to be an acceptance by the Valuer of any responsibility or liability to any person/ party other than the Client.

We will not, pursuant to the Letter of Engagement, perform any management functions for You, nor make any decisions. You are responsible for making management decisions, including accepting responsibility for the results.

The Valuation Report does not constitute an offer or invitation to any section of the public to subscribe for or purchase any securities in, or the other business or assets or liabilities of the Target or Client. This letter forms an integral part of the Valuation Report and should be read in conjunction with the Valuation Report enclosed herein.

For KPMG Valuation Services LLP

Yours faithfully

Amit Jain
IBBI Registered Valuer
RV No- IBBI/RV/06/2018/10501

Glossary

%	Percentage
A	Actual
Adj.	Adjusted
B	Budgeted
bn	Billion
CAGR	Compounded Annual Growth Rate
Capex	Capital Expenditure
CoCo	Comparable Companies
COD	Commercial operation date
CoTrans	Comparable Transactions
Cr	Crore
CWIP	Capital Work In Progress
DBFOT	Design, Build, Finance, Operate and Transfer
DCF	Discounted Cash Flow
EBIT	Earnings Before Interest and Tax
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortization
EV	Enterprise Value
FCFF	Free Cash Flows to Firm
FV	Fair Value
FY	Financial Year
IBEF	India Brand Equity Foundation
IKTPL	IRB Kota Tollway Private Limited
IMF	International Monetary Fund
INR	Indian Rupee
InvIT	Investment Trust
k	Thousands
Kd	Cost of Debt
Ke	Cost of Equity
Km	Kilometer
KPMG	KPMG Valuation Services LLP
LoE	Letter of Engagement
Management	Management of Target
MAT	Minimum Alternate Tax
mn	Million
MoRTH	The Ministry of Road Transport and Highways
n.a.	Not applicable
n.m.	No Meaningful Figure
NA	Not applicable
NAV	Net Asset Value
NHAI	National Highways Authority of India
NHIDCL	National Highway and Infrastructure Development Corporation Limited
NWC	Net Working Capital
O&M	Operation and Maintenance
PAT	Profit After Tax
PBT	Profit Before Tax
PIB	Press Information Bureau
PV	Present Value
R(f)	Risk free rate of Return
R(m)	Market rate of Return
Rf	Risk-free Rate
SEBI	Securities and Exchange Board of India
Sponsor	IRB Infrastructure Developers Limited
SPV	Special Purpose Vehicle
Valuation Date	31 January 2024
WACC	Weighted Average Cost Of Capital
WPI	Wholesale Price Index
y-o-y	Year on year
YTD	Year to date

Contents

1.

Executive Summary

Overview

Terms of the Engagement

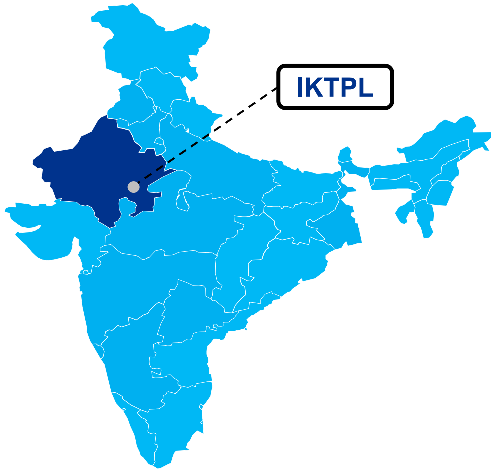
- We have been appointed by IRBI Trust to undertake Equity Valuation of IRB Kota Tollway Private Limited ("IKTPL" or "Target")
- The Valuation shall be undertaken in accordance with Regulation 21 of the SEBI InvIT Regulations where valuation is required to be conducted by a registered valuer and such valuation report is required to be in compliance with the SEBI InvIT Regulations.
- As per the LoE, the valuation is to be carried out as on 31 January 2024. This report has been prepared by KPMG pursuant to terms of LoE.

IRBI Trust Overview

- IRB Infrastructure Developers Limited ("IRBIDL" or "sponsor") is one of the largest infrastructure development and construction companies in India in the roads and highways sector. It was incorporated on 27 July 1998 and is based in Mumbai, India.
- The object and purpose of IRBI Trust is to carry on the activity of an infrastructure investment trust under the InvIT regulations. Investment by IRBI Trust shall only be in holding companies, SPVs, infrastructure projects, securities in India or other permitted investments in accordance with the InvIT regulations, the investment strategy and IRBI Trust documents.
- IRBI Trust is held by IRBIDL as sponsor with 51% stake and remaining 49% stake is held by GIC through its affiliates.
- We understand that IRBI Trust is contemplating a rights issue, to fund the upfront fee payments of three new road projects, including the Target.
- As of 31st January 2024, IRBI Trust owns stake in 15 SPVs, including the Target.

SPV Overview

- IRBI Trust has acquired Toll, Operate and Transfer ("TOT") rights from the NHAI to operate the Kota bypass and cable stay bridge on NH76 in Rajasthan, for an upfront concession fee of INR 522 crores
- The concession agreement for the project was executed between IRBI Trust and NHAI on 12th January 2024.
- For the duration of the concession period, the SPV is required to maintain and operate the tollway and carry out repair and refurbishment whenever required.



Valuation Approach and Methodology

Approach	Method
Income Approach	Discounted Cash Flow Method (DCF)

Source(s): Management information, IRBI Trust website, KPMG Analysis

Valuation Conclusion

Equity Value of Target

Valuation conclusion	
INR Crores	
Present value of cash flows	149
Enterprise Valuation	**149**
Add: Net Cash/ Debt	-
Equity Valuation	**149**

The Enterprise Value of the IKTPL is INR 149 crores. As represented by the Management, there is no surplus cash or debt outstanding as on Valuation Date. Hence, the 100% Equity Value of IKTPL is estimated to be INR 149 crores as on 31 January 2024.

Source(s): Management information, KPMG analysis

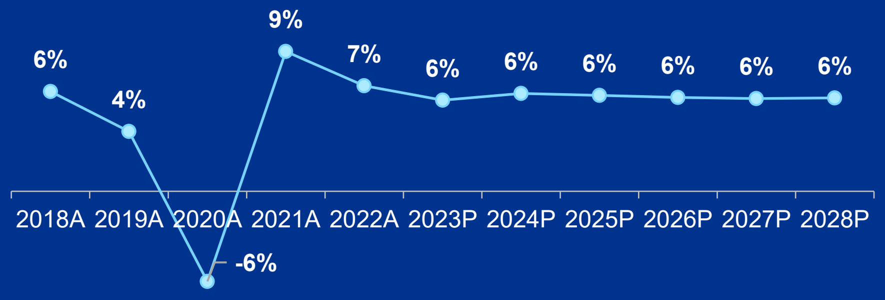
2.

Industry Overview

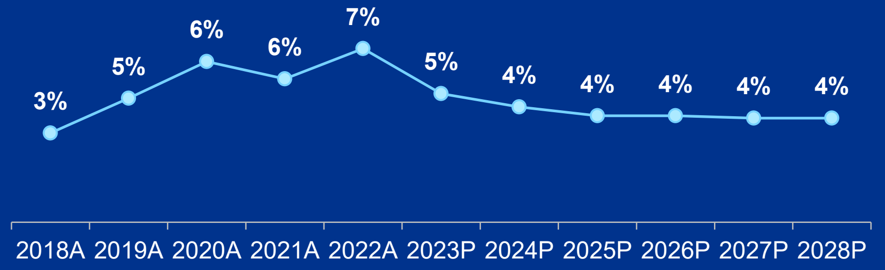
Indian Economy Outlook

Strong economic growth in the first quarter of 2023 helped India overcome the UK to become the fifth-largest economy after it recovered from the COVID-19 pandemic shock. Also, according to IMF economic outlook, India continues to be the fastest-growing economy in the world.

Real GDP growth rate (%)



Annual percentage changes of average consumer prices (%)



Infra Sector

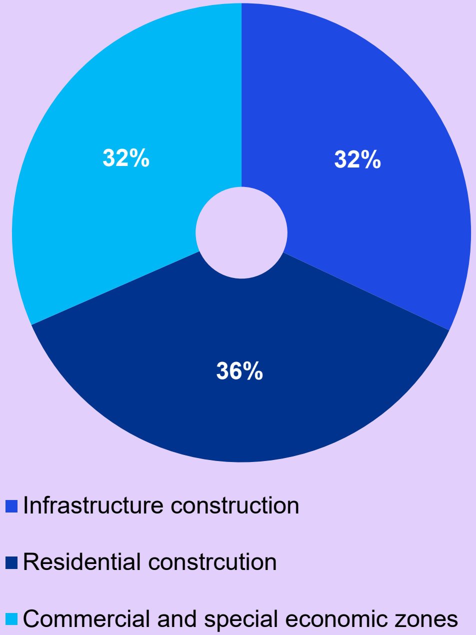
Infrastructure is a key enabler in helping India become a USD 26 trillion economy by 2047. The government has announced a strong pipeline of infra projects across sectors.

Capital investment outlay for infrastructure is being increased by 33 per cent, which would be 3.3 per cent of GDP and almost three times the outlay in 2019-20.

India Infrastructure market (USD billion)

Construction Industry

Market segmentation of India's Construction industry (2022)



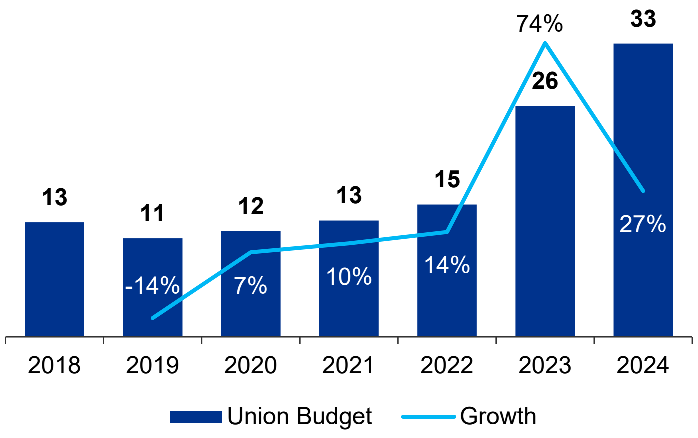
Source(s): International Monetary Fund ("IMF"), India Brand Equity Foundation ("IBEF"), Modor intelligence, EMIS

Road Transport and Highways

Road Transport and Highways sector

- The Ministry of Road Transport and Highways ("MoRTH") formulates and administers policies for road transport, national highways and transport research. It is also involved with the construction and maintenance of the National Highways ("NHs") through the National Highways Authority of India ("NHAI"), and the National Highway and Infrastructure Development Corporation Limited ("NHIDCL"). NHAI is an agency of MoRTH which is also responsible for the toll collection on several highways.
- The Union Budget 2023-24 underscored the central government's focus on infrastructure development in India with a big increase in infrastructure spending.

Outlay for Roads under the Union Budget (USD billion)



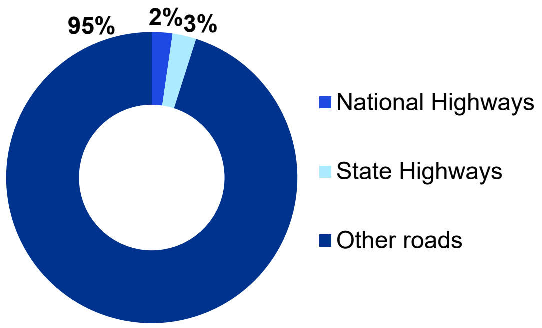
**2023 data is as of 30 December 2022*

Source(s): MoRTH, IBEF, Invest India

2nd

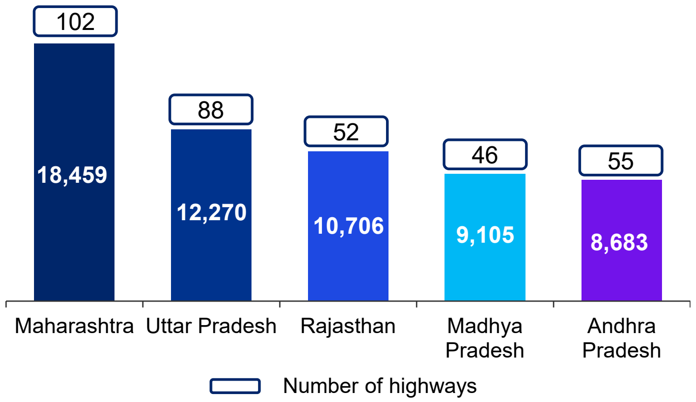
India has the second largest road network in the world of about 67 lakh km. This comprises National Highways, Expressways, State Highways, District Roads, Other District Roads and Village Roads.

Road & Highway – classification breakup



As per the data from Ministry of Road Transport and Highways, National Highways (NHs) make up for about 2.2 per cent (1,46,145 km) of the total road network of India (66,71,083 km).

Top 5 states by length of NHs in India (Km)



National Highways carry over 40 per cent of the total traffic across the length and breadth of the country. Maharashtra has the largest network of National Highways with 18,459 km (12.7%). As per MoRTH, there are 962 highways in India.

(State-wise split is as per Dec 2022)

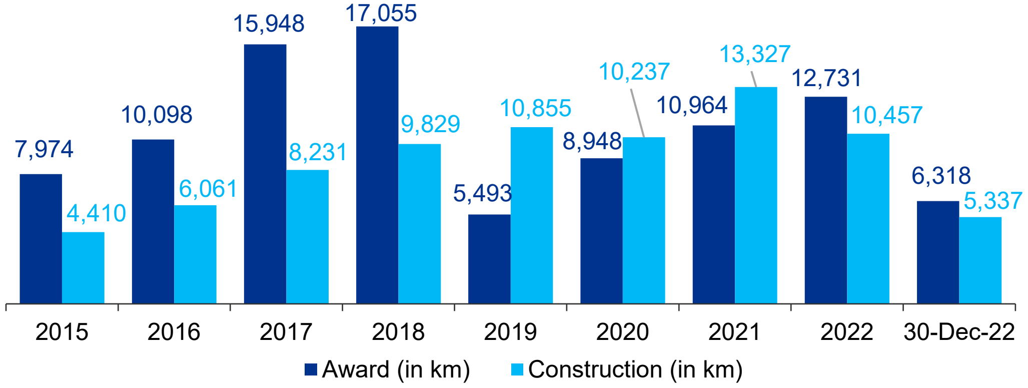
36.2%

The market for roads and highways in India is projected to grow at a CAGR of 36.2 per cent during 2016-2025, on account of growing government initiatives to improve transportation infrastructure in the country.

Key drivers of the sector

Pace of length of highways awarded and constructed (in kms)

The awarding of projects has picked up pace after the sanction of ambitious Bharatmala programme. The Government of India has allocated INR 1.9 lakh crore under the National Infrastructure Pipeline for 2025. The government also aims to construct 23 new national highways by 2025.



13%
2015-2023
CAGR - Length of highways constructed

1.3
2030
Estimated toll collection (in INR lakh crore)

14k
2024
Road construction target (in km)

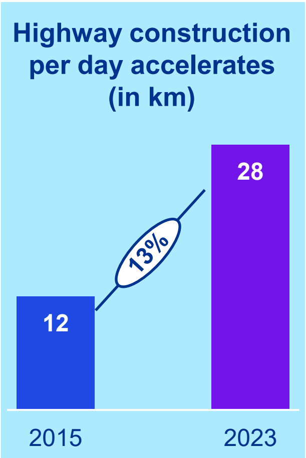
40 km
2024
Estimated road constructed per day

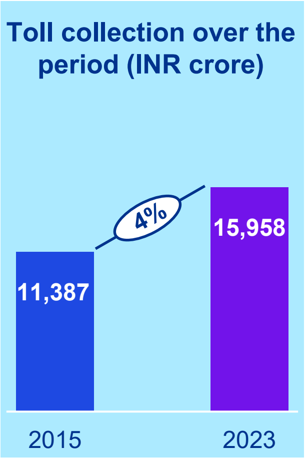
Source(s): MoRTH, Press Information Bureau ("PIB"), RTO Care, Money control

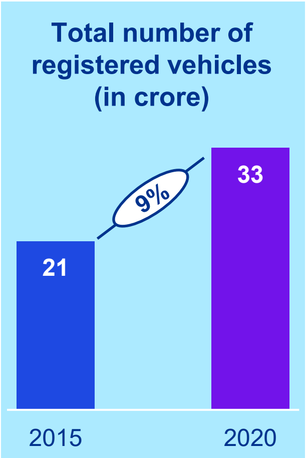
Toll operations efficiency increased due to adoption and growth of FASTag

7.9 Cr As of 30th November 2023, banks have issued over 7.9 crore FASTags with an average daily ETC transactions of 86.6 lakhs.

147 Cr The average daily collection via FASTag on NH fee plaza is INR 147.3 crore thereby increasing efficiency in toll operations.







2023 data is as of 05 January 2024
- CAGR

Government has implemented multiple initiatives in the last 9 years to augment the capacity of the National Highway infrastructure in the country. The pace of National Highways construction has increased consistently between 2014-15 and 2022-23 due to the systematic push through corridor-based National Highway development approach.

Financing in road infrastructure

Financing infrastructure

Investment in road infrastructure is long-term and returns are seen several years after construction. Roads and highways are financed through Government and private sources. Funding from Government sources includes budgetary allocations.

Private financing

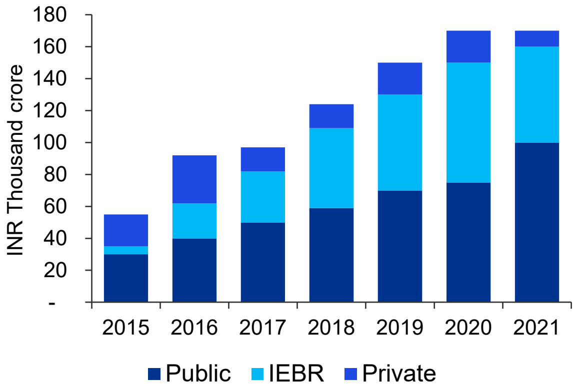
Under private financing, the private developer builds a road, and in return has the right to collect toll for a specified period of time. The developer is responsible for the maintenance of roads during this period.

Public financing

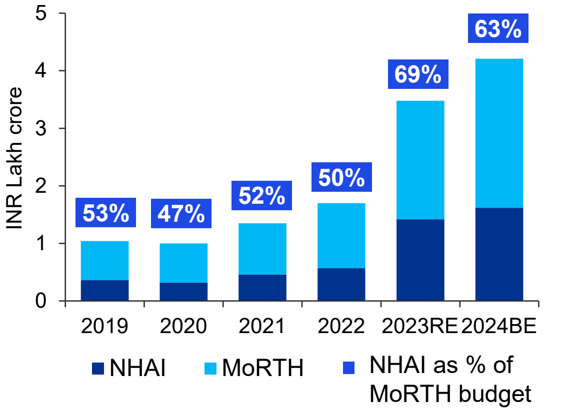
Funding from government sources includes budgetary allocations, which are financed from taxes, cesses, or dedicated road funds. Publicly funded projects are usually given to contractors under various contract models such as the Engineering Procurement Construction (EPC).

Financing in road sector & MoRTH, NHAI budget

Investment sources (Public, Private or Internal and Extra-Budgetary Resources) for road construction projects over the past six years.



With the high share of NHAI funding in MoRTH budget, NHAI is expected to account for 5k - 5.5k km in this fiscal and 5.8k - 6.2k km in the next.



Investment Opportunities in Roads & Highways

5,954	**2568**	**701**	**392**
Projects	**Promoters**	**District**	**Opportunity (USD billion)**

Types of projects awarded by NHAI

a. Engineering Procurement & Construction

Under the EPC model, Government pays private players to lay roads. The private player has no role in the road's ownership, toll collection or maintenance.

b. Build Operate Transfer ("BOT")

Private players build, operate and maintain the road for a specified period before transferring the asset back to the Government. The private player arranges all the finances for the project, while collecting toll revenue/ annuity fee from the Government.

c. Hybrid Annuity Model ("HAM")

HAM is a hybrid model, a mix of the EPC and BOT (build, operate, transfer) models. HAM combines EPC (40 per cent) and BOT-Annuity (60 per cent). On behalf of the government, NHAI releases 40 per cent of the total project cost. The balance 60 per cent is arranged by the developer.

Source(s): PRS Legislative research, IBEF, CRISIL, MoRTH, Invest India
RE – Revised estimate, BE – Budgeted estimate

KPMG

3.

Valuation Methodology and Approach

Valuation Methodology and Approach

Methodology and Approach

Income Approach - DCF

- Historical balance sheet → Assumptions → Projected balance sheet → Projected Capex, working capital → DCF Analysis → DCF summary and sensitivities
- Historical income statement → Revenue and cost projections → Projected income statement
- Projected Capex, working capital → Projected free cashflow

Considered

Market Approach

Consider Comparability to Business and Appropriate Multiple

- **Comparable Companies Method (“CoCo”)**
- **Comparable Companies Method (“CoCo”)**
- **Market Price Method**

Not Considered

Cost Approach

- **Net Asset Value (“NAV”) Method**
- **Replacement Cost New**
- **Market Value of Assets or Realizable Value**

Not Considered

The valuation has been performed as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issues by the Institute of Chartered Accountants of India.

Valuation Methodologies - Income Approach

✓

Discounted Cash Flows ("DCF")

- Under a DCF approach, forecast cash flows are discounted back to the present date, generating a net present value for the cash flow stream of the business. A terminal value at the end of the explicit forecast period is then determined and that value is also discounted back to the valuation date to give an overall value for the business.
- A discounted cash flow methodology typically requires the forecast period to be of such a length to enable the business to achieve a stabilized level of earnings, or to be reflective of an entire operation cycle for more cyclical industries.
- The rate at which the future cash flows are discounted ("the discount rate") should reflect not only the time value of money, but also the risk associated with the business' future operations. The discount rate most generally employed is weighted average cost of capital ("WACC"), reflecting an optimal as opposed to actual financing structure.
- In calculating the terminal value, regard must be had to the business' potential for further growth beyond the explicit forecast period. The "constant growth model", which applies an expected constant level of growth to the cash flow forecast in the last year of the forecast period and assumes such growth is achieved in perpetuity, is a common method. These results would be cross-checked, however, for reasonability to implied exit multiples.
- Due to the finite life of the concession period of the Target, we have not computed a terminal value for the valuation of the Target
- The rate at which future cash flows are discounted should reflect not only the time value of the cash flows but also the risk associated with the business' future operations. This means that in order for a DCF to produce a sensible valuation figure, the importance of the quality of the underlying cash flow forecasts is fundamental.
- The DCF approach has been applied in the valuation of the Target.

Valuation Methodologies - Market Approach

Comparable Companies ("CoCo")

- Under comparable companies method, the value of shares / business of a company is determined based on market multiples of publicly traded comparable companies. Although no two companies are entirely alike, the companies selected as comparable companies should be engaged in the same or a similar line of business as the subject company.
- The appropriate multiple is generally based on the performance of listed companies with similar business models and size.
- The CoCo methodology has been not been applied in the valuation of the Target.
- The list of companies in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, comparable companies' method is not considered.

Comparable Transactions ("CoTrans")

- Under comparable transactions method, the value of shares / business of a company is determined based on market multiples of publicly disclosed transactions in the similar space as that of the subject company. Due to different purposes of investments, transaction rationale and synergy benefits, different control premiums and minority discounts are embedded in the transaction values.
- Multiples are generally based on data from recent transactions in a comparable sector, but with appropriate adjustment after consideration has been given to the specific characteristics of the business being valued.
- The list of transactions in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, Therefore, comparable transactions method has not been considered for the valuation of the Target.

Market Price Method

- Under this approach, the value of the business is arrived at considering the market price of the company based on the daily moving averages of the last six-month volume traded weighted average of closing price on the stock exchange where the company's shares are most frequently traded.
- The market price methodology has not been considered in the valuation of the Target as it is not publicly listed or traded on any stock exchange.

Valuation Methodologies – Cost Approach

Net Asset Value ("NAV") Method

- Under the net asset value approach, total value is based on the sum of net asset value as recorded on the balance sheet.
- A net asset methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business.
- The net assets methodology has not been considered for the valuation of the Target as the Target is operational and the financials are made on a going concern basis.

Replacement Cost New

- The replacement cost of a business is the cost of acquiring similar assets employed in the business and/or reaching a similar level of development. A purchaser, faced with a build versus buy scenario, may be prepared to pay significantly over and above this cost to obtain advantages including time saved in developing a similar business, and risk of failure.
- The replacement cost method quantifies the cost and risk to reach the present stage of development.
- This approach is often used for start-up/non-mature technology or biotech businesses.
- Hence, the replacement cost method has not been considered.

Market Value of Assets or Realizable Value

- Under the market value methodology, total value is based on the sum of market value of asset value less market value of liabilities plus, the value of intangible assets not recorded on the balance sheet.
- This methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business.
- Hence, the market value method has not been considered.

WACC Analysis

Discount Rate and Terminal Value

Discount rate

In order to determine the discount rate, we have used the WACC methodology as set out below:

WACC = Ke * (E/(D + E)) + Kd * (1-T) * (D/(D + E))

Where:	Ke	=	cost of equity
	E	=	market value of equity
	Kd	=	cost of debt
	D	=	market value of debt
	T	=	corporate taxation rate

The cost of equity is derived using the Capital Asset Pricing Model (“CAPM”) as follows:

	Ke	=	Rf + ß * (Rm – Rf) + α
Where:	Rf	=	the current return on risk-free assets
	Rm	=	the expected average return of the market
	(Rm – Rf)	=	the average risk premium above the risk - free rate that a “market” portfolio of assets is earning
	ß	=	the beta factor, being the measure of the systematic risk of a particular asset relative to the risk of a portfolio of all risky assets
	α	=	company specific risk factor (alpha)

Terminal Value

- Due to the finite life of the concession period of the Target, we have not computed a terminal value for the valuation of the Target.

Summary - WACC

Risk free rate (Rf) 7.2%	• The nominal risk-free rate is based on our understanding of the analysis of 10 year benchmark government of India securities yield as well analysis of the consensus forecast yield.
Equity risk premium 7%	• Equity risk premium is estimated based on KPMG's understanding of prevailing market return in India.
Relevered beta 1.01	• Beta is a measure of the risk of the shares of a company. ß is the co-variance between the return on sample stock and the return on the market. In order to determine the appropriate beta factor for the Company, consideration must be given either to the market beta of the Company or betas of comparable quoted companies. • We have considered companies involved in the road operating industry and infrastructure investment trusts. • Betas are low in this industry due to the stable nature of the road operating industry and low level of cash flow volatility due to the relatively steady usage of roads. Refer annexure 3.
Cost of equity 14.3%	• Based on above parameters cost of equity is 14.3%.
Post Tax Cost of Debt (Kd) **6.5 per cent**	• We have considered the average marginal cost of borrowing of 8.75 per cent as provided by Management. • Based on a Pre-tax cost of debt of 8.75 per cent and tax rate of 25.17 per cent which is the tax rate applicable to the Target. Post-tax cost of debt is arrived at by multiplying pre-tax cost of debt by (1-Tax Rate).
WACC **9.64 per cent**	• Based on our analysis and discussion with management, we have considered a debt-to-equity ratio of 150%. • Considering the above cost of equity of 14.3 per cent, the post-tax cost of debt of 6.5 per cent and the debt-to-equity ratio of 150%, the estimated weighted average cost of capital (WACC) is 9.64 per cent.

Source: KPMG analysis, Capital IQ

4.

Valuation of IKTPL

Overview

Project details

IKTPL is engaged to carry out the operation and maintenance of the Kota bypass and cable stay bridge on NH76 in accordance with the concession agreement on a TOT basis. The project stretch is 27.8 kms, 4 lane road near Kota, Rajasthan.

Concession period

IKTPL is required to operate, manage and maintain, repair or otherwise make improvements to the project highway in accordance with the concession agreement for a period of 20 years commencing from the appointed date. The concession agreement also stipulates that the concession period shall not be reduced by more than 5 years or increased by more than 10 years whatsoever. As per the traffic report, no shortening or extension of concession period is estimated.

Upfront Concession Fee

As per the concession agreement, IKTPL is required to pay INR 522 crores as upfront concession fee to NHAI.

Highlights

Particulars	Details
Project location	Kota Bypass and Cable Stay Bridge
Concessionaire	IKTPL
State	Rajasthan
Tollable length (kms)	27.8
Concession agreement date	12-Jan-24
Expected Appointed date	1-Apr-24
Completion certificate date	NA
Concession Period	20 years from Appointed Date

Shareholding as at 31 January 2024

Particulars	Stake %
IRB Infrastructure Trust	100%

Source(s): Management information

Key Assumptions

a. Modification in concession period

- Article 24 of the concession agreement of IKTPL provides for modification of the concession period.
- As per Article 24.5.1, “in the event Actual Fee I shall have fallen short of or exceeded the Target Fee 1 by more than 20% (twenty percent), then for every 1% (one percent) shortfall or increase as compared to the Target Fee 1, the Concession Period, subject to fulfilment of terms of this Agreement, shall be increased by 1.5% (one and a half percent) or decreased by 0.75% (point seven five percent) thereof; provided that such increase or decrease in Concession Period shall not in any case exceed not more than limits specified in Clause 3.1.”
- As per Article 24.5.2, “in the event Actual Fee 2 shall have fallen short of or exceeded the Target Fee 2 by more than 30% (thirty percent), then for every 1% (one percent) sho1tfall or increase as compared to the Target Fee 2, the Concession Period, subject to fulfilment of terms of this Agreement, shall be increased by 1.5% (one and a half percent) or decreased by 0.75% (point seven five percent) thereof; provided that such increase or decrease in Concession Period shall not in any case exceed not more than limits specified in Clause 3.1.”
- As per the traffic report, revenue variance is estimated to be lower than the caps mentioned above. Thus, there shall be no modification to the concession period in line with the above articles of the concession agreement.
- Management informed us that they are expected to make payment of upfront fee to authority in the fourth week of March 2024, post which they can begin tolling and operations. Thus, Management have assumed appointed date to be 01 April 2024 for IKTPL. We have relied on Management assumption and are considering appointed date as 01 April 2024. Considering the concession period of 20 years, the concession end date has been estimated as 31 March 2044. Thus, the explicit period for the current valuation exercise has been considered to be from 1 February 2024 to 31 March 2044.

b. Traffic volume

- Traffic volume for the forecast period has been considered based on the traffic report prepared by independent consultant in March 2024.

c. Toll rates

- Annual revision of toll rate for the forecast period shall be in accordance with National Highway Fee (Determination of Rates and Collection) Rules, 2008 and amendment thereto. Additionally, the applicable base rate shall be revised annually on April 1 to reflect the increase in wholesale price index (“WPI”) but such revision shall be restricted to 40% of the increase in WPI on overall basis during the concession period. As given in the traffic report, WPI has been projected to grow by 5% initially and stepped down for the future years.

d. Revenue

- Toll revenue has been considered basis the pessimistic scenario from the traffic report prepared by an independent consultant.

e. Periodic maintenance & routine maintenance costs

- Periodic and routine maintenance costs have been considered from a technical feasibility study performed by the Management. Given the technical nature of this study, review of the same is not part of our scope of work. Hence, We have considered the routine and periodic maintenance based on Management representation.

f. Depreciation & amortization

- Forecasted depreciation on assets has been provided by the Management. Management has forecasted depreciation to increase in line with the increase in revenue.

g. Tax

- Management represented that the SPV has adopted the new tax regime. Thus, tax outflows for the forecast have been calculated based on the new regime of income tax.

h. Capex

- Capex is forecasted to be INR 589 Cr in FY2024 and FY2025. Management represented that the cost primarily pertains to the upfront concession fee of INR 522 crores to be paid by IKTPL to NHAI. The remaining pertains to EPC cost and, preliminary and pre-operative cost.

Source(s): Management information

Discounted Cash Flows (1/2)

Discounted Cash Flow											
		FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033
INR crores		**2 months**	**12 months**	**12 months**	**12 months**	**12 months**	**12 months**	**12 months**	**12 months**	**12 months**	**12 months**
Revenue		-	62	70	77	85	93	101	111	122	134
EBITDA	**[A]**	-	40	49	55	62	61	69	85	96	106
EBITDA margin		0%	65%	70%	72%	73%	66%	68%	77%	78%	80%
Depreciation		-	(11)	(12)	(13)	(15)	(16)	(18)	(20)	(21)	(24)
EBIT		-	29	37	42	47	45	51	66	74	83
EBIT margin		0%	47%	53%	54%	56%	48%	50%	59%	61%	62%
Less: Tax on EBIT	[B]		(3)	(5)	(6)	(8)	(8)	(10)	(14)	(17)	(19)
Change in working capital	[C]	(19)	-	-	-	19	-	-	-	-	-
Less : Capex	[D]	(531)	(58)		-	-	-	-	-	-	-
Free cash flows to the firm	**E = [A+B+C+D]**	**(550)**	**(21)**	**44**	**49**	**73**	**53**	**59**	**71**	**79**	**87**
Discounting period		0.083	0.667	1.667	2.667	3.667	4.667	5.667	6.667	7.667	8.667
Discount factor	[F]	0.992	0.940	0.858	0.782	0.714	0.651	0.594	0.541	0.494	0.450
Present value of cash flows	**[E*F]**	**(546)**	**(20)**	**38**	**38**	**52**	**35**	**35**	**39**	**39**	**39**

Source(s): Management information, KPMG analysis

Discounted Cash Flows (2/2)

Discounted Cash Flow		FY2034 12 months	FY2035 12 months	FY2036 12 months	FY2037 12 months	FY2038 12 months	FY 2039 12 months	FY2040 12 months	FY2041 12 months	FY2042 12 months	FY2043 12 months	FY2044 12 months
INR crores												
Revenue		146	158	172	186	203	219	239	258	280	304	330
EBITDA	**[A]**	99	110	142	155	171	175	193	224	244	267	269
EBITDA margin		68%	70%	82%	83%	84%	80%	81%	87%	87%	88%	82%
Depreciation		(26)	(28)	(30)	(33)	(36)	(39)	(42)	(46)	(49)	(53)	(58)
EBIT		73	82	112	122	135	136	151	178	195	213	211
EBIT margin		50%	52%	65%	66%	67%	62%	63%	69%	70%	70%	64%
Less: Tax on EBIT	[B]	(17)	(20)	(28)	(32)	(36)	(37)	(41)	(49)	(54)	(60)	(60)
Change in working capital	[C]	-	-	-	-	-	-	-	-	-	-	-
Less : Capex	[D]	-	-	-	-	-	-	-	-	-	-	-
Free cash flows to the firm	**E = [A+B+C+D]**	**81**	**90**	**114**	**123**	**135**	**138**	**152**	**175**	**190**	**207**	**209**
Discounting period		9.667	10.667	11.667	12.667	13.667	14.667	15.667	16.667	17.667	18.667	19.667
Discount factor	[F]	0.411	0.375	0.342	0.312	0.284	0.259	0.236	0.216	0.197	0.179	0.164
Present value of cash flows	**[E*F]**	**33**	**34**	**39**	**38**	**38**	**36**	**36**	**38**	**37**	**37**	**34**

Source(s): Management information, KPMG analysis

Valuation conclusion	
INR Crores	
Present value of cash flows	149
Present value of release of working capital	-
Enterprise Valuation	**149**

WACC	**9.64%**

Basis the above and using a WACC of 9.64%, the Enterprise Value of IKTPL on 31 January 2024 is INR 149 crore.

Refer page no 22 for detailed WACC analysis

5.

Valuation Conclusion

Valuation Conclusion

Equity Value of Target

Valuation conclusion	
INR Crores	
Present value of cash flows	149
Enterprise Valuation	**149**
Add: Net Cash/ Debt	-
Equity Valuation	**149**

The Enterprise Value of the IKTPL is INR 149 crores. As represented by the Management, there is no surplus cash or debt outstanding as on Valuation Date. Hence, the 100% Equity Value of IKTPL is estimated to be INR 149 crores as on 31 January 2024.

Source(s): Management information, KPMG analysis

6.

Annexures

Annexure 1: Sources of Information

This Report is prepared based on the below sources of information as provided to us by the Management:

The following information provided to KPMG by Management was used in preparation of the Valuation Report:

- Financial projections of IKTPL from 01 February 2024 till the end of the concession period
- Other data for IKTPL which is as follows –
    - Concession Agreement
    - Traffic report prepared by GMD consultants
- List of approvals, permits, licenses and litigations for IKTPL as at 31 January 2024.
- Management has provided Traffic consultant report prepared by GMD Consultants (appointed independently by Client) dated March 2024 for IKTPL. Management has confirmed that the traffic study shared are the most recent study available. Forecast revenue has been considered from the aforesaid traffic study report for the SPV. We have compared the revenue considered in the forecast model with the revenue forecasted in the traffic study report and noted that the Management has considered the pessimistic revenue scenario in their forecast.
- Management has informed us that as at Valuation Date there are no material balances in the financial statements of IKTPL, as IKTPL was incorporated in January 2024. We have relied on Management representation and are considering NIL opening balance sheet.
- Management informed us that they are expected to make payment of upfront fee to authority in the fourth week of March 2024, post which they can begin tolling and operations. Thus, Management have assumed appointed date to be 01 April 2024 for IKTPL. We have relied on Management assumption and considering appointed date as 01 April 2024.
- Management has informed us that routine and periodic maintenance for IKTPL has been considered from a technical feasibility study performed by the Management. Given the technical nature of this study, review of the same is not part of our scope of work. Hence, We have considered the routine and periodic maintenance based on Management representation
- The EPC costs and the preliminary and pre-operative expenses have been provided by the Management.
- Besides the above, there may be other information provided by the Management which may not have been perused by us in any detail, if not considered relevant for our defined scope.
- In addition to the above, we have also obtained such other information and explanations from the Management, either verbally or in written form, as were considered relevant for the purpose of the valuation. We had discussions with the key members of the Management, including Mr. Tushar Kawedia; Ms. Shilpa Todankar; and Mr. Rushabh Gandhi.
- The following external sources were used in the preparation of the report:
    - External databases such as Capital IQ, Mergermarket, etc.
    - Relevant information made available to us by Management at our request.
    - Publicly available information and secondary information.

Annexure 2: Beta Computation

Beta computation 31 January 2024	Market Capitalization	Total Debt	Debt / Equity	Debt / Total Capital	Beta	Tax Rate	Unlevered Beta	Target's Debt Equity	Target's Tax Rate	Re Levered Beta
IRB Infrastructure Developers Limited	279,497	180,906	64.7%	39.3%	1.03	25.17%	0.63	150.0%	25.17%	1.34
PNC Infratech Limited	96,451	70,738	73.3%	42.3%	0.91	25.17%	0.59	150.0%	25.17%	1.24
Dilip Buildcon Limited	56,906	67,629	118.8%	54.3%	1.03	25.17%	0.55	150.0%	25.17%	1.16
Bharat Road Network Limited	5,558	13,693	246.4%	71.1%	1.10	25.17%	0.39	150.0%	25.17%	0.82
National Highways Infra Trust	na	na	na	na	na	na	na	na	na	na
India Infrastructure Trust	na	na	na	na	na	na	na	na	na	na
India Grid Trust	98,821	186,972	189.2%	65.4%	0.42	25.17%	0.17	150.0%	25.17%	0.37
Powergrid Infrastructure Investment Trust	88,963	5,721	6.4%	6.0%	0.43	25.17%	0.41	150.0%	25.17%	0.87
IRB InvIT Fund	40,180	30,380	75.6%	43.1%	0.43	25.17%	0.28	150.0%	25.17%	0.59
G R Infraprojects Limited	107,503	63,080	58.7%	37.0%	0.87	25.17%	0.60	150.0%	25.17%	1.28
Median			74.5%				0.48			**1.01**

Note:
(a) Market capitalization of comparable companies has been considered based on 3-month volume weighted average share prices till 31 January 2024.
(b) Beta has been computed based on 1-year daily average adjusted beta.
(c) Although, National Highway Infra Trust and India Infrastructure Trust are part of our comparable companies set, they has been excluded while calculating the beta due to low trading.

Source(s): KPMG analysis based on data sourced from S&P Capital IQ database.

Annexure 3: Other disclosures as required under SEBI InvIT Regulations

The following disclosures are as at 31 January 2024 for the Target

1. **Valuation of the project in the previous 3 years:** Management has represented that no previous valuation of the project has been undertaken.
2. **List of one-time sanctions/approvals which are obtained or pending/ List of up to date/overdue periodic clearances:** Refer annexure 3a for the aforementioned information.
3. **Estimates of already carried as well as proposed major repairs and improvements along with estimated time of completion:** Refer annexure 3b for the aforementioned information.
4. **Purchase price of the project by the InvIT:** Not Applicable
5. **On-going and closed material litigations including tax disputes in relation to the assets, if any:** Management represented that there are no on-going and closed material litigations in the Target.
6. **Statement of assets**: Management has represented that there are no assets under the Target as on the Valuation Date.
7. **Revenue pendencies including local authority taxes associated with InvIT asset and compounding charges, if any:** Management represented that there are no revenue pendencies including local authority taxes and compounding charges with respect to the Target.
8. **Vulnerability to natural or induced hazards that may not have been covered in town planning/ building control:** Management represented that there are no such natural or induced hazards which have been not considered in town planning/building control with respect to the Target.
9. **Latest pictures of the SPV:** Refer annexure 3c for the aforementioned information.
10. **Date of site inspection**: During the month of February/March 2024.
11. **In term of the SEBI InvIT Regulations, we hereby confirm that:**

- We are competent to undertake the valuation.
- We are independent and have prepared this Report on fair and unbiased basis.
- The Valuation has been performed as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issued by the Institute of Chartered Accountants of India.
- KPMG is not affiliated to the Client in any manner whatsoever. Further KPMG does not have a prospective interest in the Target which is the subject of this Valuation and KPMG's fee is not contingent on an action or event resulting from the analysis, opinions or conclusions in the Valuation.

Caveat to disclosures
KPMG has not independently verified the documents related to disclosures mentioned in the annexures and have relied on Management representation for the same.

Source(s): Management information, KPMG analysis

Annexure 3a: One-time sanctions and approvals and overdue periodic clearances

Sr. No	Description	Remarks
a.	Permission of State Government for extraction of boulder from quarries	Not Applicable
b.	Permission of Village Panchayat and Pollution Control Board for installation of crushers	Not Applicable
c.	License for use of explosives	Not Required
d.	Permission of the State Government for drawing water from river / reservoir	The SPV is in process of identifying land for plant set-up and borrow areas. Once identified,Applicable permits and Clearances shall be obtained
e.	License from Inspector of factories or other Competent Authority for setting up Batching Plant	
f.	Clearance of Pollution Control Board for setting up Batching Plant	
g.	Clearance of Village Panchayat & PCB for Asphalt Plant	
h.	Permission of Village Panchayat and State Government for Borrow Earth	
i.	Permission of State Government for cutting of Trees	Not Required
j.	Any other permits or clearances required under Applicable Laws	Not Applicable

Source(s): Management information

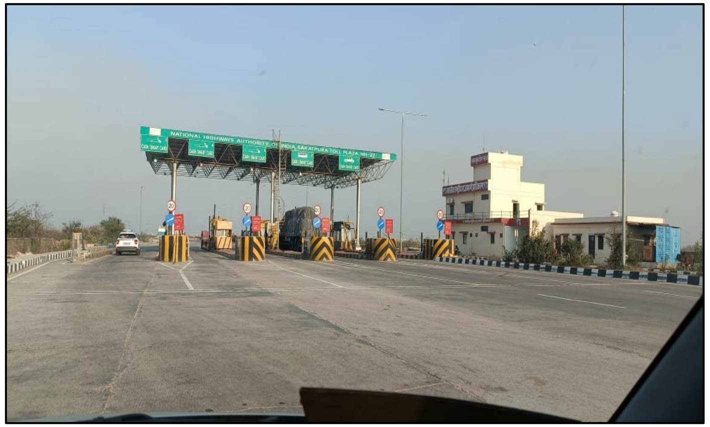
Annexure 3b: Estimates of already carried as well as proposed major repairs and improvements

Estimate of already carried out as well as proposed major repairs										
INR Crore										
Name of SPV	**FY2025**	**FY2026**	**FY2027**	**FY2028**	**FY2029**	**FY2030**	**FY2031**	**FY2032**	**FY2033**	**FY2034**
IRB Kota Tollway Pvt. Ltd.	2	-	-	-	8	8	-	-	-	19

Estimate of already carried out as well as proposed major repairs										
INR Crore										
Name of SPV	**FY2035**	**FY2036**	**FY2037**	**FY2038**	**FY 2039**	**FY 2040**	**FY2041**	**FY2042**	**FY 2043**	**FY2044**
IRB Kota Tollway Pvt. Ltd.	19	-	-	-	11	12	-	-	-	23

Source(s): Management information

Annexure 3c: Site pictures



Source(s): Site visits

KPMG

7.

Scope & Limitations

Scope & Limitations (1/3)

Terms of Engagement

- KPMG Valuation Services LLP ("KPMG" or "we") has been appointed by IRB Infrastructure Trust ("IRBI Trust", "Trust" or "Client" or "you") in relation to carrying out Equity Valuation of IRB Kota Tollway Private Limited ("IKTPL" or "Target") as on the agreed date of the valuation for the proposed rights issue in accordance with Regulation 21 of the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 where valuation is required to be conducted by a registered valuer (as defined under section 247 of the Companies Act, 2013) and such valuation report ("Report") is required to be in compliance with the SEBI InvIT Regulations ("Engagement" or "Valuation").
- The terms of the Engagement are set out in our letter of engagement dated 16 October 2023 along with Addendum to the letter of engagement dated 01 March 2024 (together referred as "LoE").
- The date of Valuation is 31 January 2024 ("Valuation Date").
- This Report sets out KPMG's conclusions on the Valuation and has been prepared in accordance with LoE. Our Report is confidential to the Client and will be used by the Client only for purposes mentioned in the LoE. The Report will be issued by us on the express understanding that it shall not be copied, disclosed or circulated or referred to in correspondence or discussion with any third party. This Report is confidential to the Client and it is given on the express understanding that it is not communicated, in whole or in part, to any third party without KPMG's prior written consent. Neither the Report nor its content may be used for any other purpose without prior written consent of KPMG. This Report has a limited scope as specified in it. KPMG will not accept any responsibilities to any other party to whom the Report may be shown or who may acquire a copy of the Report.
- We are not responsible to any other person/ party for any decision of such person/ party based on this Report. Any person/ party intending to provide finance/ invest in the shares/ businesses of the Target/ their holding companies/ subsidiaries/ group companies, if any, shall do so after seeking their own professional advice and after carrying out their own due diligence procedures to ensure that they are making an informed decision. If any person/ party (other than the Client) chooses to place reliance upon any matters included in the report, they shall do so at their own risk and without recourse to the Valuer. It is hereby notified that usage, reproduction, distribution, circulation, copying or otherwise quoting of this Report or any part thereof, except for the purpose as set out earlier in this report, without our prior written consent, is not permitted, unless there is a statutory or a regulatory requirement to do so.
- We are aware that the Report may have to be shared with certain regulatory authorities in India and stock exchanges in India. We also understand from you that the Report may be included in the offer document for the rights issue and therefore, we understand that the Report may enter public domain and hereby provide our consent to such sharing subject to the following:
  - You shall indemnify and hold us harmless against any loss that may be incurred by us arising out of or relating to sharing of the Report with regulatory authorities in India or stock exchanges in India, or the Report entering the public domain as mentioned herein, as also against all costs, charges and expenses (including legal expenses) suffered or incurred by us on account of the aforesaid. In this clause "us" shall include all Firm Persons and "you" shall include Other Beneficiaries (as these terms have been defined in the LoE).
  - Such Report shall be disclosed in full and strictly in such forms as KPMG has provided to the Client without any deviation.
  - KPMG shall not be liable to any person or party for any reason and under any circumstances.
  - The readers of the Report shall not bring any claim against KPMG for matters arising out of or consequent upon disclosure of the Report.
  - The Report shall be issued with all the disclaimers as provided by KPMG at the time of issuance of the Report.

Scope & Limitations (2/3)

Disclosure of Interest/Conflict

- KPMG is not affiliated to the Client in any manner whatsoever. Further, KPMG does not have a prospective interest in the business which is the subject of this engagement.
- KPMG’s fee is not contingent on an action or event resulting from the analyses, opinions or conclusions in this Report.

Basis of Value

- The report has been prepared on the basis of “Fair Value” as at Valuation Date. The generally accepted definition of “Fair Value” is the value as applied between a hypothetical willing vendor and a hypothetical willing prudent buyer in an open market and with access to all relevant information.

Premise of Value

- The report has adopted “Going Concern Value” as the premise of value in the given circumstances. The generally accepted definition of Going concern value is the value of a business enterprise that is expected to continue to operate in the future.
- The valuation has been performed as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issued by the Institute of Chartered Accountants of India.

Scope and Limitations

- This Report is based on the information provided by the Client and has been confirmed by the Client. KPMG have not independently verified or checked the accuracy or timeliness of the same. KPMG have indicated within this Report the sources of the information presented and have satisfied ourselves, so far as possible, that the information presented is consistent with other information which is made available to us in the course of our work in accordance with the terms of this engagement letter. KPMG have not, however, sought to establish the reliability of the sources by reference to other evidence, except as may be specifically agreed in writing between us.
- KPMG has read, analyzed and discussed the financial information and underlying management assumptions pertaining to the Target as provided by the Management of the Client (“Management”). This information has been solely relied upon by KPMG for the Valuation.
- We have based our analysis on the business plan of the Target for the period from 1 February 2024 to the end of the concession periods of the Target as provided by the Management ("Management Business Plan") and key underlying assumptions. Any changes in the assumptions or methodology used to consolidate the financial statements may significantly impact our analysis and therefore the Valuation.
- KPMG has read and analyzed but have not commented on the appropriateness of or independently verified the Management Business Plan and underlying data and assumptions and accordingly provided no opinion on the same. If there were any omissions, inaccuracies or misrepresentations of the information provided by the Management, this may have a material effect on our findings and therefore the Valuation.
- The realization of the projections in the Management Business Plan will be dependent on the continuing validity of assumptions on which it is based. Our analysis therefore will not and cannot be directed to providing any assurance about the achievability of the future plans. Since the projections relate to the future, actual results are likely to be different from the projected results because events and circumstances do not occur as expected and the differences may be material.

Scope & Limitations (3/3)

- This Report makes reference to 'KPMG analysis'. This indicates only that we have (where specified) undertaken certain analytical activities on the underlying data to arrive at the information presented.
- Our work did not constitute an audit of the financial statements and accordingly, we do not express any opinion on the truth and fairness of the financial position as indicated in this Report. Our work did not constitute a validation of the financial statements of the Target, and accordingly, we do not express any opinion on the same.
- We have carried out the Valuation based on Management Business Plan received. Our scope of work does not include any commercial / legal / technical due diligence or carrying out any environmental / technical feasibility analysis or comparison of Management Business Plan with approved budgets / annual operating plans of the Target. We have relied on Management's representation on such considerations and any changes in the same may significantly impact our analysis and therefore the Valuation.
- Wherever applicable, we have relied upon the legal opinion document / affidavit copies provided by Management in relation to the current status of the projects. We have not carried out / sought any independent legal opinion, nor have we verified the accuracy of the legal opinion shared. Any discrepancy in the same may significantly impact our analysis and therefore the Valuation.
- Our opinion is based on prevailing market, economic, and other conditions at the Valuation Date. It should be appreciated that these conditions can change over relatively short periods of time, not only as a result of internal factors, but because of external factors, which could impact the value, either positively or negatively.
- For our analysis, we have relied on published and secondary sources of data, whether or not made available by the Client. We have not independently verified the accuracy or timeliness of the same.
- Neither KPMG nor any of its affiliates worldwide are responsible for updating this Report because of events or transactions occurring subsequent to the date of this Report. Any updates or second opinions in this Report cannot be sought by the Management from external agencies including global offices of KPMG without the prior written permission of KPMG.
- KPMG has not considered any finding made by other external agencies in carrying out the Valuation analysis other than the one mentioned herein.
- For the purpose of the Valuation, our scope does not include valuation or legal due diligence of current assets and liabilities and as represented by the Management, the same has been considered at their respective book value.
- For the purpose of this engagement and Report, we have made no investigation of, and assume no responsibility for the title to, or liabilities against the Target. Our conclusion of value assumes that the title to the assets and liabilities of the Target reflected in the financial statements as on Valuation Date is intact as at the date of this Report.
- Any discrepancies in any table/ annexure between the total and the sums of the amounts listed are due to rounding-off.
- The Report should be read in the light of these limitations, and we caution that had these matters been within the scope of our review, our conclusions may have changed, and that change could be material.
- The information presented in this Report does not reflect the outcome of any due diligence procedures. The reader is cautioned that the outcome of due diligence process could change the information herein and our Valuation, and that change could be material.
- This Report forms an integral whole and cannot be split in parts. The outcome of the Valuation can only lead to proper conclusions if the Report as a whole is taken into account.

Management representation

- This Report is prepared on the basis of the sources of information listed in Annexure 1. KPMG has relied upon written representation by the Management that the information contained in the Report is materially accurate and complete, fair in its manner of portrayal and therefore forms a reliable basis for the Valuation.

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Valuation Report

March 2024

IRB Infrastructure Trust

Valuation of IRB Lalitpur Tollway Private Limited

Valuation Report

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March 2024

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Strictly private and confidential

08 March 2024

IRB Infrastructure Trust
1101, Hiranandani Knowledge Park,
Technology Street, Hill Side Avenue,
Powai, Mumbai – 400 076

Dear Sir,

Valuation Report ("Valuation Report")

This is in accordance with the terms of reference set out in our Letter of Engagement dated 16 October 2023 along with Addendum to the letter of engagement dated 01st March 2024 (together referred as "LoE"), wherein KPMG Valuation Services LLP (hereinafter referred to as the "KPMG " or "Us" or "We") has been appointed by IRB Infrastructure Trust ("the Client", or "IRBI Trust/Trust", or "the Company" or "You") in relation to carrying out Equity Valuation of IRB Lalitpur Tollway Private Limited ("SPV" or "ILTPL" or "Target") as on the agreed date of the valuation for the proposed rights issue. The Valuation is to be conducted in accordance with Regulation 21 of the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 ("SEBI InvIT Regulations") where valuation is required to be conducted by a registered valuer (as defined under section 247 of the Companies Act, 2013) and such valuation report ("Report") is required to be in compliance with the SEBI InvIT Regulations ("Engagement").

KPMG is appointed as a registered valuer for the purpose of the Engagement (Registered valuer entity under Companies (Registered Valuers and Valuation) Rules, 2017 having IBBI Registration No. IBBI/RV-E/06/2020/115).

The date for the valuation is 31 January 2024 ("Valuation Date").

We hereby enclose our Valuation Report dated 08 March 2024. This is our deliverable and sets out KPMG's conclusions on the valuation of the Target and has been prepared in accordance with the LoE as of Valuation Date. The report is based on the information provided to KPMG by the management of the Target ("Management").

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The Valuation Report is confidential to the Client and will be used by the Client only for the purpose, as indicated in this Report, for which we have been appointed. The results of our valuation analysis and our Report cannot be used or relied by the Client for any other purpose or by any other party for any other purpose whatsoever.

The Valuation Report is issued by us on the express understanding that it shall not be copied, disclosed or circulated or referred to in correspondence or in discussion with any third party or used for any other purpose without KPMG's prior written consent. We are aware that the Report may have to be shared with certain regulatory authorities in India and stock exchanges in India and therefore Report may enter the public domain and hereby provide our consent to such sharing. It is clarified that reference to this valuation Report in any document and/ or filing with aforementioned regulatory authorities/ stock exchanges in India, shall not be deemed to be an acceptance by the Valuer of any responsibility or liability to any person/ party other than the Client.

We will not, pursuant to the Letter of Engagement, perform any management functions for You, nor make any decisions. You are responsible for making management decisions, including accepting responsibility for the results.

The Valuation Report does not constitute an offer or invitation to any section of the public to subscribe for or purchase any securities in, or the other business or assets or liabilities of the Target or Client. This letter forms an integral part of the Valuation Report and should be read in conjunction with the Valuation Report enclosed herein.

For KPMG Valuation Services LLP

Yours faithfully

Amit Jain
IBBI Registered Valuer
RV No- IBBI/RV/06/2018/10501

Glossary

%	Percentage
A	Actual
Adj.	Adjusted
B	Budgeted
bn	Billion
CAGR	Compounded Annual Growth Rate
Capex	Capital Expenditure
CoCo	Comparable Companies
COD	Commercial operation date
CoTrans	Comparable Transactions
Cr	Crore
CWIP	Capital Work In Progress
DBFOT	Design, Build, Finance, Operate and Transfer
DCF	Discounted Cash Flow
EBIT	Earnings Before Interest and Tax
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortization
EV	Enterprise Value
FCFF	Free Cash Flows to Firm
FV	Fair Value
FY	Financial Year
IBEF	India Brand Equity Foundation
ILTPL	IRB Lalitpur Tollway Private Limited
IMF	International Monetary Fund
INR	Indian Rupee
InvIT	Investment Trust
k	Thousands
Kd	Cost of Debt
Ke	Cost of Equity
Km	Kilometer
KPMG	KPMG Valuation Services LLP
LoE	Letter of Engagement
Management	Management of Target
MAT	Minimum Alternate Tax
mn	Million
MoRTH	The Ministry of Road Transport and Highways
n.a.	Not applicable
n.m.	No Meaningful Figure
NA	Not applicable
NAV	Net Asset Value
NHAI	National Highways Authority of India
NHIDCL	National Highway and Infrastructure Development Corporation Limited
NWC	Net Working Capital
O&M	Operation and Maintenance
PAT	Profit After Tax
PBT	Profit Before Tax
PIB	Press Information Bureau
PV	Present Value
R(f)	Risk free rate of Return
R(m)	Market rate of Return
Rf	Risk-free Rate
SEBI	Securities and Exchange Board of India
Sponsor	IRB Infrastructure Developers Limited
SPV	Special Purpose Vehicle
Valuation Date	31 January 2024
WACC	Weighted Average Cost Of Capital
WPI	Wholesale Price Index
y-o-y	Year on year
YTD	Year to date

Contents

KPMG

1.

Executive Summary

Overview

Terms of the Engagement

- We have been appointed by IRBI Trust to undertake Equity Valuation of IRB Lalitpur Tollway Private Limited ("ILTPL" or "Target")
- The Valuation shall be undertaken in accordance with Regulation 21 of the SEBI InvIT Regulations where valuation is required to be conducted by a registered valuer and such valuation report is required to be in compliance with the SEBI InvIT Regulations.
- As per the LoE, the valuation is to be carried out as on 31 January 2024. This report has been prepared by KPMG pursuant to terms of LoE.

IRBI Trust Overview

- IRB Infrastructure Developers Limited ("IRBIDL" or "sponsor") is one of the largest infrastructure development and construction companies in India in the roads and highways sector. It was incorporated on 27 July 1998 and is based in Mumbai, India.
- The object and purpose of IRBI Trust is to carry on the activity of an infrastructure investment trust under the InvIT regulations. Investment by IRBI Trust shall only be in holding companies, SPVs, infrastructure projects, securities in India or other permitted investments in accordance with the InvIT regulations, the investment strategy and IRBI Trust documents.
- IRBI Trust is held by IRBIDL as sponsor with 51% stake and remaining 49% stake is held by GIC through its affiliates.
- We understand that IRBI Trust is contemplating a rights issue, to fund the upfront fee payments of three new road projects, including the Target.
- As of 31st January 2024, IRBI Trust owns stake in 15 SPVs, including the Target.

SPV Overview

- IRBI Trust has acquired Toll, Operate and Transfer ("ToT") rights from the NHAI to operate the Lalitpur – Sagar – Lakhnadon section of NH26 in Uttar Pradesh and Madhya Pradesh for an upfront concession fee of 4,428 crores
- The concession agreement for the project was executed between IRBI Trust and NHAI on 24th November 2023.
- For the duration of the concession period, the SPV is required to maintain and operate the tollway and carry out repair and refurbishment whenever required.

Valuation Approach and Methodology

Approach	Method
Income Approach	Discounted Cash Flow Method (DCF)

Source(s): Management information, IRBI Trust website, KPMG Analysis

Valuation Conclusion

Equity Value of Target

Valuation conclusion	
INR Crores	
Present value of cash flows	222
Enterprise Valuation	**222**
Add: Net Cash/ Debt	-
Equity Valuation	**222**

The Enterprise Value of the ILTPL is INR 222 crores. As represented by the Management, there is no surplus cash or debt outstanding as on Valuation Date. Hence, the 100% Equity Value of ILTPL is estimated to be INR 222 crores as on 31 January 2024.

Source(s): Management information, KPMG analysis

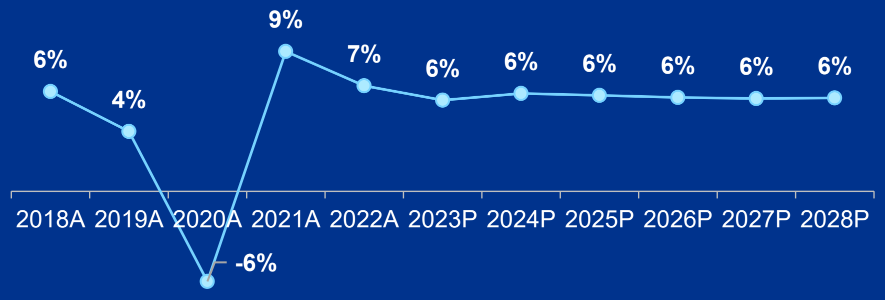
2.

Industry Overview

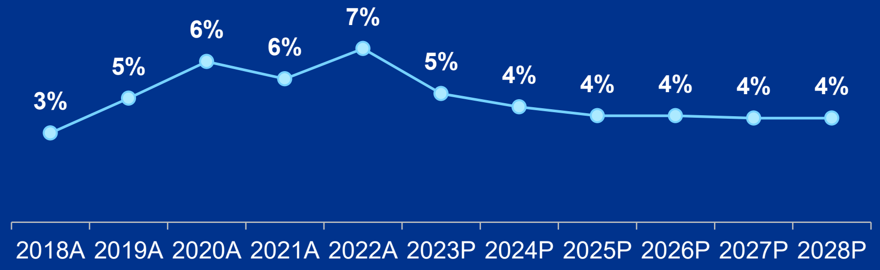
Indian Economy Outlook

Strong economic growth in the first quarter of 2023 helped India overcome the UK to become the fifth-largest economy after it recovered from the COVID-19 pandemic shock. Also, according to IMF economic outlook, India continues to be the fastest-growing economy in the world.

Real GDP growth rate (%)



Annual percentage changes of average consumer prices (%)

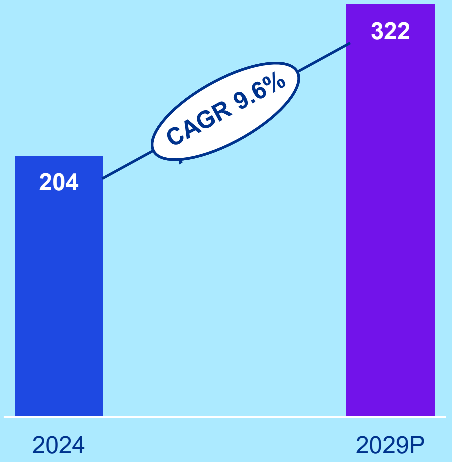


Infra Sector

Infrastructure is a key enabler in helping India become a USD 26 trillion economy by 2047. The government has announced a strong pipeline of infra projects across sectors.

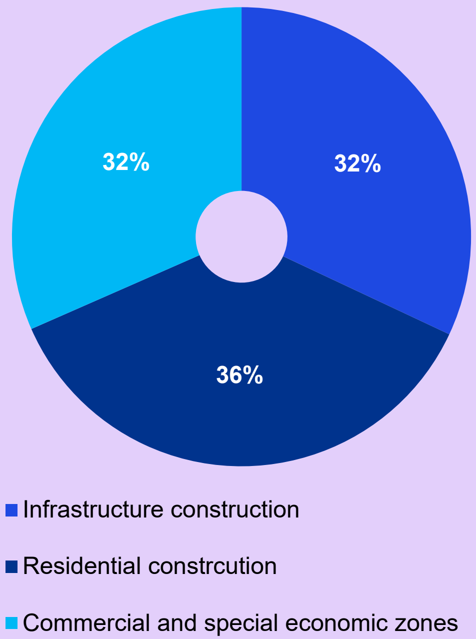
Capital investment outlay for infrastructure is being increased by 33 per cent, which would be 3.3 per cent of GDP and almost three times the outlay in 2019-20.

India Infrastructure market (USD billion)



Construction Industry

Market segmentation of India's Construction industry (2022)



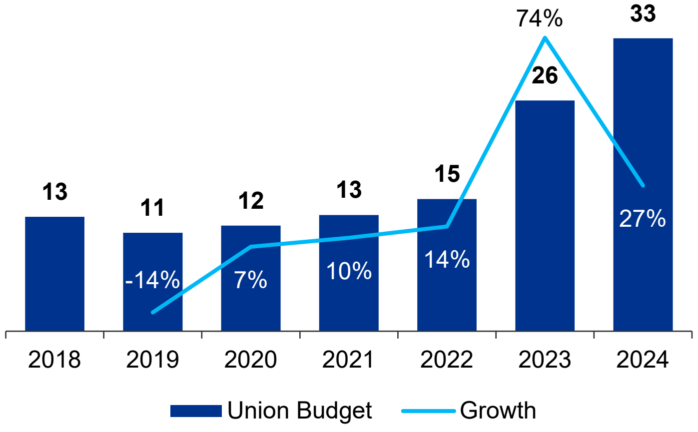
Source(s): International Monetary Fund ("IMF"), India Brand Equity Foundation ("IBEF"), Modor intelligence, EMIS

Road Transport and Highways

Road Transport and Highways sector

- The Ministry of Road Transport and Highways ("MoRTH") formulates and administers policies for road transport, national highways and transport research. It is also involved with the construction and maintenance of the National Highways ("NHs") through the National Highways Authority of India ("NHAI"), and the National Highway and Infrastructure Development Corporation Limited ("NHIDCL"). NHAI is an agency of MoRTH which is also responsible for the toll collection on several highways.
- The Union Budget 2023-24 underscored the central government's focus on infrastructure development in India with a big increase in infrastructure spending.

Outlay for Roads under the Union Budget (USD billion)

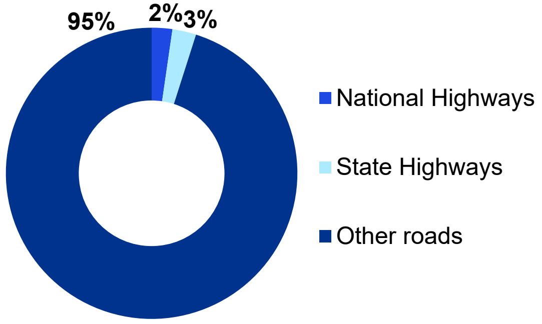


**2023 data is as of 30 December 2022*

Source(s): MoRTH, IBEF, Invest India

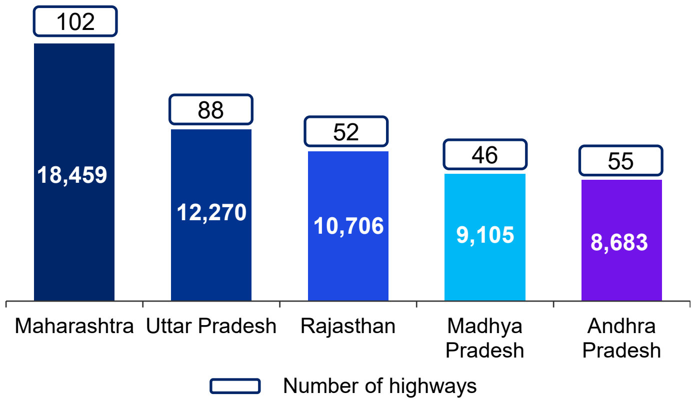
2nd India has the second largest road network in the world of about 67 lakh km. This comprises National Highways, Expressways, State Highways, District Roads, Other District Roads and Village Roads.

Road & Highway – classification breakup



As per the data from Ministry of Road Transport and Highways, National Highways (NHs) make up for about 2.2 per cent (1,46,145 km) of the total road network of India (66,71,083 km).

Top 5 states by length of NHs in India (Km)



National Highways carry over 40 per cent of the total traffic across the length and breadth of the country. Maharashtra has the largest network of National Highways with 18,459 km (12.7%). As per MoRTH, there are 962 highways in India.

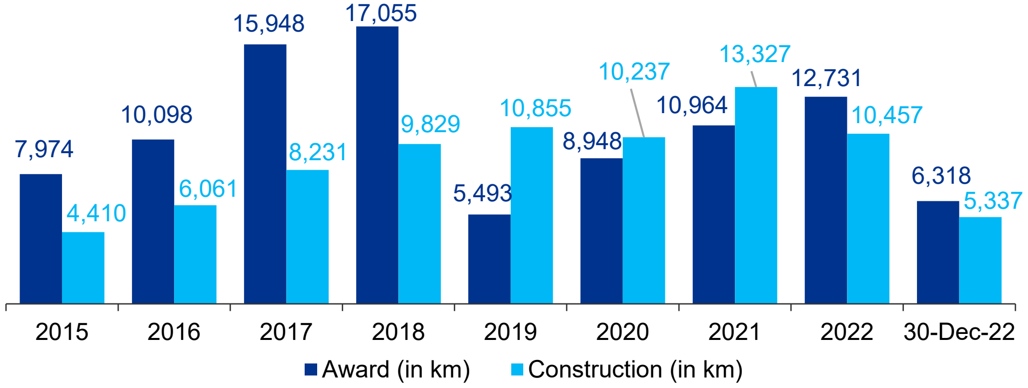
(State-wise split is as per Dec 2022)

36.2% The market for roads and highways in India is projected to grow at a CAGR of 36.2 per cent during 2016-2025, on account of growing government initiatives to improve transportation infrastructure in the country.

Key drivers of the sector

Pace of length of highways awarded and constructed (in kms)

The awarding of projects has picked up pace after the sanction of ambitious Bharatmala programme. The Government of India has allocated INR 1.9 lakh crore under the National Infrastructure Pipeline for 2025. The government also aims to construct 23 new national highways by 2025.



13%
2015-2023
CAGR - Length of highways constructed

1.3
2030
Estimated toll collection (in INR lakh crore)

14k
2024
Road construction target (in km)

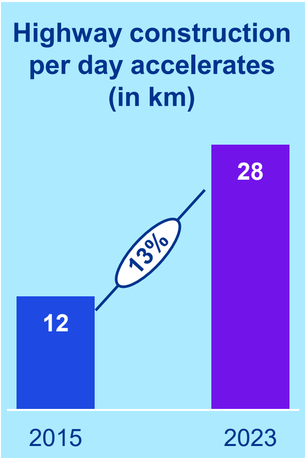
40 km
2024
Estimated road constructed per day

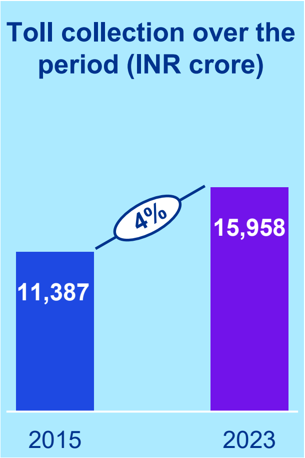
Source(s): MoRTH, Press Information Bureau ("PIB"), RTO Care, Money control

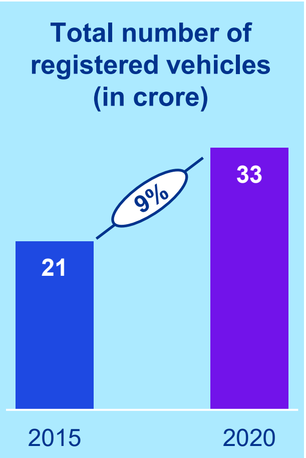
Toll operations efficiency increased due to adoption and growth of FASTag

7.9 Cr As of 30th November 2023, banks have issued over 7.9 crore FASTags with an average daily ETC transactions of 86.6 lakhs.

147 Cr The average daily collection via FASTag on NH fee plaza is INR 147.3 crore thereby increasing efficiency in toll operations.







2023 data is as of 05 January 2024

- CAGR

Government has implemented multiple initiatives in the last 9 years to augment the capacity of the National Highway infrastructure in the country. The pace of National Highways construction has increased consistently between 2014-15 and 2022-23 due to the systematic push through corridor-based National Highway development approach.

Financing in road infrastructure

Financing infrastructure

Investment in road infrastructure is long-term and returns are seen several years after construction. Roads and highways are financed through Government and private sources. Funding from Government sources includes budgetary allocations.

Private financing

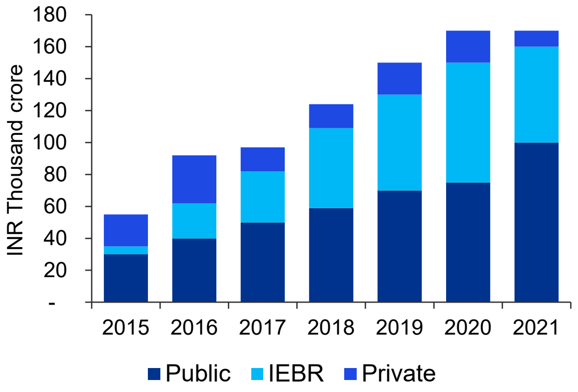
Under private financing, the private developer builds a road, and in return has the right to collect toll for a specified period of time. The developer is responsible for the maintenance of roads during this period.

Public financing

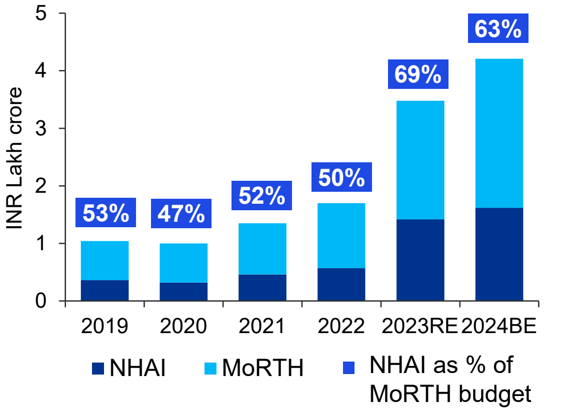
Funding from government sources includes budgetary allocations, which are financed from taxes, cesses, or dedicated road funds. Publicly funded projects are usually given to contractors under various contract models such as the Engineering Procurement Construction (EPC).

Financing in road sector & MoRTH, NHAI budget

Investment sources (Public, Private or Internal and Extra-Budgetary Resources) for road construction projects over the past six years.



With the high share of NHAI funding in MoRTH budget, NHAI is expected to account for 5k - 5.5k km in this fiscal and 5.8k - 6.2k km in the next.



Investment Opportunities in Roads & Highways

5,954 Projects

2568 Promoters

701 District

392 Opportunity (USD billion)

Types of projects awarded by NHAI

a. Engineering Procurement & Construction

Under the EPC model, Government pays private players to lay roads. The private player has no role in the road's ownership, toll collection or maintenance.

b. Build Operate Transfer ("BOT")

Private players build, operate and maintain the road for a specified period before transferring the asset back to the Government. The private player arranges all the finances for the project, while collecting toll revenue/ annuity fee from the Government.

c. Hybrid Annuity Model ("HAM")

HAM is a hybrid model, a mix of the EPC and BOT (build, operate, transfer) models. HAM combines EPC (40 per cent) and BOT-Annuity (60 per cent). On behalf of the government, NHAI releases 40 per cent of the total project cost. The balance 60 per cent is arranged by the developer.

Source(s): PRS Legislative research, IBEF, CRISIL, MoRTH, Invest India
RE – Revised estimate, BE – Budgeted estimate

3.

Valuation Methodology and Approach

Valuation Methodology and Approach

Methodology and Approach

Income Approach - DCF

- Historical balance sheet
- Assumptions
- Projected balance sheet
- Projected Capex, working capital
- DCF Analysis
- DCF summary and sensitivities

- Historical income statement
- Revenue and cost projections
- Projected income statement
- Projected free cashflow

Considered

Market Approach

Consider Comparability to Business and Appropriate Multiple

- **Comparable Companies Method (“CoCo”)**
- **Comparable Companies Method (“CoCo”)**
- **Market Price Method**

Not Considered

Cost Approach

- **Net Asset Value (“NAV”) Method**
- **Replacement Cost New**
- **Market Value of Assets or Realizable Value**

Not Considered

The valuation has been performed as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issues by the Institute of Chartered Accountants of India.

Valuation Methodologies - Income Approach

✓

Discounted Cash Flows (“DCF”)

- Under a DCF approach, forecast cash flows are discounted back to the present date, generating a net present value for the cash flow stream of the business. A terminal value at the end of the explicit forecast period is then determined and that value is also discounted back to the valuation date to give an overall value for the business.
- A discounted cash flow methodology typically requires the forecast period to be of such a length to enable the business to achieve a stabilized level of earnings, or to be reflective of an entire operation cycle for more cyclical industries.
- The rate at which the future cash flows are discounted (“the discount rate”) should reflect not only the time value of money, but also the risk associated with the business’ future operations. The discount rate most generally employed is weighted average cost of capital (“WACC”), reflecting an optimal as opposed to actual financing structure.
- In calculating the terminal value, regard must be had to the business’ potential for further growth beyond the explicit forecast period. The “constant growth model”, which applies an expected constant level of growth to the cash flow forecast in the last year of the forecast period and assumes such growth is achieved in perpetuity, is a common method. These results would be cross-checked, however, for reasonability to implied exit multiples.
- Due to the finite life of the concession period of the Target, we have not computed a terminal value for the valuation of the Target
- The rate at which future cash flows are discounted should reflect not only the time value of the cash flows but also the risk associated with the business’ future operations. This means that in order for a DCF to produce a sensible valuation figure, the importance of the quality of the underlying cash flow forecasts is fundamental.
- The DCF approach has been applied in the valuation of the Target.

Valuation Methodologies - Market Approach

Comparable Companies ("CoCo")

- Under comparable companies method, the value of shares / business of a company is determined based on market multiples of publicly traded comparable companies. Although no two companies are entirely alike, the companies selected as comparable companies should be engaged in the same or a similar line of business as the subject company.
- The appropriate multiple is generally based on the performance of listed companies with similar business models and size.
- The CoCo methodology has been not been applied in the valuation of the Target.
- The list of companies in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, comparable companies' method is not considered.

Comparable Transactions ("CoTrans")

- Under comparable transactions method, the value of shares / business of a company is determined based on market multiples of publicly disclosed transactions in the similar space as that of the subject company. Due to different purposes of investments, transaction rationale and synergy benefits, different control premiums and minority discounts are embedded in the transaction values.
- Multiples are generally based on data from recent transactions in a comparable sector, but with appropriate adjustment after consideration has been given to the specific characteristics of the business being valued.
- The list of transactions in the road segment have mix of assets which are at different stages of operation / development / revenue mix/ leasing period. Therefore, Therefore, comparable transactions method has not been considered for the valuation of the Target.

Market Price Method

- Under this approach, the value of the business is arrived at considering the market price of the company based on the daily moving averages of the last six-month volume traded weighted average of closing price on the stock exchange where the company's shares are most frequently traded.
- The market price methodology has not been considered in the valuation of the Target as it is not publicly listed or traded on any stock exchange.

Valuation Methodologies – Cost Approach

Net Asset Value ("NAV") Method	• Under the net asset value approach, total value is based on the sum of net asset value as recorded on the balance sheet. • A net asset methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business. • The net assets methodology has not been considered for the valuation of the Target as the Target is operational and the financials are made on a going concern basis.
Replacement Cost New	• The replacement cost of a business is the cost of acquiring similar assets employed in the business and/or reaching a similar level of development. A purchaser, faced with a build versus buy scenario, may be prepared to pay significantly over and above this cost to obtain advantages including time saved in developing a similar business, and risk of failure. • The replacement cost method quantifies the cost and risk to reach the present stage of development. • This approach is often used for start-up/non-mature technology or biotech businesses. • Hence, the replacement cost method has not been considered.
Market Value of Assets or Realizable Value	• Under the market value methodology, total value is based on the sum of market value of asset value less market value of liabilities plus, the value of intangible assets not recorded on the balance sheet. • This methodology is most applicable for businesses where the value lies in the underlying assets and not the ongoing operations of the business. • Hence, the market value method has not been considered.

WACC Analysis

Discount Rate and Terminal Value

Discount rate

In order to determine the discount rate, we have used the WACC methodology as set out below:

WACC = Ke * (E/(D + E)) + Kd * (1-T) * (D/(D + E))

Where:	Ke	=	cost of equity
	E	=	market value of equity
	Kd	=	cost of debt
	D	=	market value of debt
	T	=	corporate taxation rate

The cost of equity is derived using the Capital Asset Pricing Model ("CAPM") as follows:

	Ke	=	Rf + ß * (Rm – Rf) + α
Where:	Rf	=	the current return on risk-free assets
	Rm market	=	the expected average return of the
	(Rm – Rf)	=	the average risk premium above the risk - free rate that a "market" portfolio of assets is earning
	ß	=	the beta factor, being the measure of the systematic risk of a particular asset relative to the risk of a portfolio of all risky assets
	α	=	company specific risk factor (alpha)

Terminal Value

- Due to the finite life of the concession period of the Target, we have not computed a terminal value for the valuation of the Target.

Summary - WACC

Risk free rate (Rf) 7.2%	• The nominal risk-free rate is based on our understanding of the analysis of 10 year benchmark government of India securities yield as well analysis of the consensus forecast yield.
Equity risk premium 7%	• Equity risk premium is estimated based on KPMG's understanding of prevailing market return in India.
Relevered beta 1.01	• Beta is a measure of the risk of the shares of a company. ß is the co-variance between the return on sample stock and the return on the market. In order to determine the appropriate beta factor for the Company, consideration must be given either to the market beta of the Company or betas of comparable quoted companies. • We have considered companies involved in the road operating industry and infrastructure investment trusts. • Betas are low in this industry due to the stable nature of the road operating industry and low level of cash flow volatility due to the relatively steady usage of roads. Refer annexure 3.
Cost of equity 14.3%	• Based on above parameters cost of equity is 14.3%.
Post Tax Cost of Debt (Kd) **6.5 per cent**	• We have considered the average marginal cost of borrowing of 8.75 per cent as provided by Management. • Based on a Pre-tax cost of debt of 8.75 per cent and tax rate of 25.17 per cent which is the tax rate applicable to the Target. Post-tax cost of debt is arrived at by multiplying pre-tax cost of debt by (1-Tax Rate).
WACC **9.64 per cent**	• Based on our analysis and discussion with management, we have considered a debt-to-equity ratio of 150%. • Considering the above cost of equity of 14.3 per cent, the post-tax cost of debt of 6.5 per cent and the debt-to-equity ratio of 150%, the estimated weighted average cost of capital (WACC) is 9.64 per cent.

Source: KPMG analysis, Capital IQ

4.

Valuation of ILTPL

Overview

Project details

ILTPL is engaged to carry out the operation and maintenance of the Lalitpur – Sagar – Lakhnadon stretch on NH26 in accordance with the concession agreement on a TOT basis. The project stretch is 316 kms, 4 lane road stretching through Uttar Pradesh and Madhya Pradesh.

Concession period

ILTPL is required to operate, manage and maintain, repair or otherwise make improvements to the project highway in accordance with the concession agreement for a period of 20 years commencing from the appointed date. The concession agreement also stipulates that the concession period shall not be reduced by more than 5 years or increased by more than 10 years whatsoever. As per the traffic report, no shortening or extension of concession period is estimated.

Upfront Concession Fee

As per the concession agreement, ILTPL is required to pay INR 4,428 crores as upfront concession fee to NHAI.

Highlights

Particulars	Details
Project location	Lalitpur-Sagar-Lakhnadon stretch on NH26
Concessionaire	ILTPL
State	Uttar Pradesh and Madhya Pradesh
Tollable length (kms)	316.1
Concession agreement date	24-Nov-23
Expected Appointed date	1-Apr-24
Completion certificate date	NA
Concession Period	20 years from Appointed Date

Shareholding as at 31 January 2024

Particulars	Stake %
IRB Infrastructure Trust	100%

Source(s): Management information

Key Assumptions

a. Modification in concession period

- Article 24 of the concession agreement of ILTPL provides for modification of the concession period.
- As per Article 24.5.1, “in the event Actual Fee I shall have fallen short of or exceeded the Target Fee 1 by more than 20% (twenty percent), then for every 1% (one percent) shortfall or increase as compared to the Target Fee 1, the Concession Period, subject to fulfilment of terms of this Agreement, shall be increased by 1.5% (one and a half percent) or decreased by 0.75% (point seven five percent) thereof; provided that such increase or decrease in Concession Period shall not in any case exceed not more than limits specified in Clause 3.1.”
- As per Article 24.5.2, “in the event Actual Fee 2 shall have fallen short of or exceeded the Target Fee 2 by more than 30% (thirty percent), then for every 1% (one percent) sho1tfall or increase as compared to the Target Fee 2, the Concession Period, subject to fulfilment of terms of this Agreement, shall be increased by 1.5% (one and a half percent) or decreased by 0.75% (point seven five percent) thereof; provided that such increase or decrease in Concession Period shall not in any case exceed not more than limits specified in Clause 3.1.”
- As per the traffic report, revenue variance is estimated to be lower than the caps mentioned above. Thus, there shall be no modification to the concession period in line with the above articles of the concession agreement.
- Management informed us that they are expected to make payment of upfront fee to authority in the fourth week of March 2024, post which they can begin tolling and operations. Thus, Management have assumed appointed date to be 01 April 2024 for ILTPL. We have relied on Management assumption and are considering appointed date as 01 April 2024. Considering the concession period of 20 years, the concession end date has been estimated as 31 March 2044. Thus, the explicit period for the current valuation exercise has been considered from 1 February 2024 to 31 March 2044.

b. Traffic volume

- Traffic volume for the forecast period has been considered based on the traffic report prepared by independent consultant in March 2024.

c. Toll rates

- Annual revision of toll rate for the forecast period shall be in accordance with National Highway Fee (Determination of Rates and Collection) Rules, 2008 and amendment thereto. Additionally, the applicable base rate shall be revised annually on April 1 to reflect the increase in wholesale price index (“WPI”) but such revision shall be restricted to 40% of the increase in WPI on overall basis during the concession period. As given in the traffic report, WPI has been projected to grow by 5% initially and stepped down for the future years.

d. Revenue

- Toll revenue has been considered basis the pessimistic scenario from the traffic report prepared by an independent consultant.

e. Periodic maintenance & routine maintenance costs

- Periodic and routine maintenance costs have been considered from a technical feasibility study performed by the Management. Given the technical nature of this study, review of the same is not part of our scope of work. Hence, We have considered the routine and periodic maintenance based on Management representation.

f. Depreciation & amortization

- Forecasted depreciation on assets has been provided by the Management. Management has forecasted depreciation to increase in line with the increase in revenue.

g. Tax

- Management represented that the SPV has adopted the new tax regime. Thus, tax outflows for the forecast have been calculated based on the new regime of income tax.

h. Capex

- Capex is forecasted to be INR 5,026 Cr in FY2024 and FY2025. Management represented that the cost primarily pertains to the upfront concession fee of INR 4,428 Cr to be paid by ILTPL to NHAI. The remaining pertains to EPC cost and, preliminary and pre-operative cost..

Source(s): Management information

Discounted Cash Flows (1/2)

Discounted Cash Flow											
INR crores		**FY2024 2 months**	**FY2025 12 months**	**FY2026 12 months**	**FY2027 12 months**	**FY2028 12 months**	**FY2029 12 months**	**FY2030 12 months**	**FY2031 12 months**	**FY2032 12 months**	**FY2033 12 months**
Revenue		-	406	458	501	550	593	648	709	778	849
EBITDA	**[A]**	-	342	391	431	477	451	501	556	619	685
EBITDA margin		0%	84%	85%	86%	87%	76%	77%	78%	80%	81%
Depreciation		-	(97)	(108)	(118)	(129)	(142)	(155)	(169)	(186)	(203)
EBIT		-	245	283	313	347	309	346	386	433	482
EBIT margin		0%	60%	62%	63%	63%	52%	53%	54%	56%	57%
Less: Tax on EBIT	[B]		(25)	(35)	(45)	(57)	(50)	(63)	(77)	(92)	(109)
Change in working capital	[C]	(150)	-	-	-	150	-	-	-	-	-
Less : Capex	[D]	(4,450)	(576)								
Free cash flows to the firm	**E = [A+B+C+D]**	**(4,600)**	**(258)**	**356**	**386**	**570**	**401**	**438**	**479**	**526**	**576**
Discounting period		0.083	0.667	1.667	2.667	3.667	4.667	5.667	6.667	7.667	8.667
Discount factor	[F]	0.992	0.940	0.858	0.782	0.714	0.651	0.594	0.541	0.494	0.450
Present value of cash flows	**[E*F]**	**(4,565)**	**(243)**	**305**	**302**	**407**	**261**	**260**	**259**	**260**	**259**

Source(s): Management information, KPMG analysis

Discounted Cash Flows (2/2)

Discounted Cash Flow

INR crores		FY2034 12 months	FY2035 12 months	FY2036 12 months	FY2037 12 months	FY2038 12 months	FY 2039 12 months	FY2040 12 months	FY2041 12 months	FY2042 12 months	FY2043 12 months	FY2044 12 months
Revenue		929	1,005	1,091	1,178	1,275	1,380	1,492	1,604	1,730	1,868	2,020
EBITDA	**[A]**	839	912	878	959	1,049	1,148	1,252	1,494	1,617	1,567	1,716
EBITDA margin		90%	91%	80%	81%	82%	83%	84%	93%	93%	84%	85%
Depreciation		(222)	(240)	(261)	(281)	(305)	(330)	(356)	(383)	(413)	(446)	(483)
EBIT		617	672	617	677	745	818	895	1,111	1,203	1,121	1,233
EBIT margin		66%	67%	57%	57%	58%	59%	60%	69%	70%	60%	61%
Less: Tax on EBIT	[B]	(148)	(166)	(157)	(178)	(201)	(226)	(252)	(313)	(344)	(331)	(368)
Change in working capital	[C]	-	-	-	-	-	-	-	-	-	-	-
Less : Capex	[D]											
Free cash flows to the firm	**E = [A+B+C+D]**	**691**	**746**	**720**	**781**	**848**	**922**	**1,000**	**1,181**	**1,273**	**1,236**	**1,347**
Discounting period		9.667	10.667	11.667	12.667	13.667	14.667	15.667	16.667	17.667	18.667	19.667
Discount factor	[F]	0.411	0.375	0.342	0.312	0.284	0.259	0.236	0.216	0.197	0.179	0.164
Present value of cash flows	**[E*F]**	**284**	**279**	**246**	**243**	**241**	**239**	**236**	**255**	**250**	**222**	**220**

Source(s): Management information, KPMG analysis

Valuation conclusion

INR Crores	
Present value of cash flows	222
Present value of release of working capital	-
Enterprise Valuation	**222**

WACC	**9.64%**

Basis the above and using a WACC of 9.64%, the Enterprise Value of ILTPL on 31 January 2024 is INR 222 crore.

Refer page no 22 for details WACC calculation

5.

Valuation Conclusion

Valuation Conclusion

Equity Value of Target

Valuation conclusion	
INR Crores	
Present value of cash flows	222
Enterprise Valuation	**222**
Add: Net Cash/ Debt	-
Equity Valuation	**222**

The Enterprise Value of the ILTPL is INR 222 crores. As represented by the Management, there is no surplus cash or debt outstanding as on Valuation Date. Hence, the 100% Equity Value of ILTPL is estimated to be INR 222 crores as on 31 January 2024.

Source(s): Management information, KPMG analysis

6.

Annexures

Annexure 1: Sources of Information

This Report is prepared based on the below sources of information as provided to us by the Management:

The following information provided to KPMG by Management was used in preparation of the Valuation Report:

- Financial projections of ILTPL from 01 February 2024 till the end of the concession period
- Other data for ILTPL which is as follows –
    - Concession Agreement
    - Traffic Report prepared by GMD consultants
- List of approvals, permits, licenses and litigations for ILTPL as at 31 January 2024.
- Management has provided Traffic consultant report prepared by GMD Consultants (appointed independently by Client) dated March 2024 for ILTPL. Management has confirmed that the traffic study shared are the most recent study available. Forecast revenue has been considered from the aforesaid traffic study report for the SPV. We have compared the revenue considered in the forecast model with the revenue forecasted in the traffic study report and noted that the Management has considered the pessimistic revenue scenario in their forecast.
- Management has informed us that as at Valuation Date there are no material balances in the financial statements of ILTPL, as ILTPL was incorporated in November 2023. We have relied on Management representation and are considering NIL opening balance sheet.
- Management informed us that they are expected to make payment of upfront fee to authority in the fourth week of March 2024, post which they can begin tolling and operations. Thus, Management have assumed appointed date to be 01 April 2024 for ILTPL. We have relied on Management assumption and considering appointed date as 01 April 2024.
- Management has informed us that routine and periodic maintenance for ILTPL has been considered from a technical feasibility study performed by the Management. Given the technical nature of this study, review of the same is not part of our scope of work. Hence, We have considered the routine and periodic maintenance based on Management representation
- The EPC costs and the preliminary and pre-operative expenses have been provided by the Management.
- Besides the above, there may be other information provided by the Management which may not have been perused by us in any detail, if not considered relevant for our defined scope.
- In addition to the above, we have also obtained such other information and explanations from the Management, either verbally or in written form, as were considered relevant for the purpose of the valuation. We had discussions with the key members of the Management, including Mr. Tushar Kawedia; Ms. Shilpa Todankar; and Mr. Rushabh Gandhi.
- The following external sources were used in the preparation of the report:
    - External databases such as Capital IQ, Mergermarket, etc.
    - Relevant information made available to us by Management at our request.
    - Publicly available information and secondary information.

Annexure 2: Beta Computation

Beta computation 31 January 2024	Market Capitalization	Total Debt	Debt / Equity	Debt / Total Capital	Beta	Tax Rate	Unlevered Beta	Target's Debt Equity	Target's Tax Rate	Re Levered Beta
IRB Infrastructure Developers Limited	279,497	180,906	64.7%	39.3%	1.03	25.17%	0.63	150.0%	25.17%	1.34
PNC Infratech Limited	96,451	70,738	73.3%	42.3%	0.91	25.17%	0.59	150.0%	25.17%	1.24
Dilip Buildcon Limited	56,906	67,629	118.8%	54.3%	1.03	25.17%	0.55	150.0%	25.17%	1.16
Bharat Road Network Limited	5,558	13,693	246.4%	71.1%	1.10	25.17%	0.39	150.0%	25.17%	0.82
National Highways Infra Trust	na	na	na	na	na	na	na	na	na	na
India Infrastructure Trust	na	na	na	na	na	na	na	na	na	na
India Grid Trust	98,821	186,972	189.2%	65.4%	0.42	25.17%	0.17	150.0%	25.17%	0.37
Powergrid Infrastructure Investment Trust	88,963	5,721	6.4%	6.0%	0.43	25.17%	0.41	150.0%	25.17%	0.87
IRB InvIT Fund	40,180	30,380	75.6%	43.1%	0.43	25.17%	0.28	150.0%	25.17%	0.59
G R Infraprojects Limited	107,503	63,080	58.7%	37.0%	0.87	25.17%	0.60	150.0%	25.17%	1.28
Median			74.5%				0.48			**1.01**

Note:
(a) Market capitalization of comparable companies has been considered based on 3-month volume weighted average share prices till 31 January 2024.
(b) Beta has been computed based on 1-year daily average adjusted beta.
(c) Although, National Highway Infra Trust and India Infrastructure Trust are part of our comparable companies set, they has been excluded while calculating the beta due to low trading.

Source(s): KPMG analysis based on data sourced from S&P Capital IQ database.

Annexure 3: Other disclosures as required under SEBI InvIT Regulations

The following disclosures are as at 31 January 2024 for the Target

1. **Valuation of the project in the previous 3 years:** Management has represented that no previous valuation of the project has been undertaken.
2. **List of one-time sanctions/approvals which are obtained or pending/ List of up to date/overdue periodic clearances:** Refer annexure 3a for the aforementioned information.
3. **Estimates of already carried as well as proposed major repairs and improvements along with estimated time of completion:** Refer annexure 3b for the aforementioned information.
4. **Purchase price of the project by the InvIT:** Not Applicable
5. **On-going and closed material litigations including tax disputes in relation to the assets, if any:** Management represented that there are no on-going and closed material litigations in the Target.
6. **Statement of assets**: Management has represented that there are no assets under the Target as on the Valuation Date.
7. **Revenue pendencies including local authority taxes associated with InvIT asset and compounding charges, if any:** Management represented that there are no revenue pendencies including local authority taxes and compounding charges with respect to the Target.
8. **Vulnerability to natural or induced hazards that may not have been covered in town planning/ building control:** Management represented that there are no such natural or induced hazards which have been not considered in town planning/building control with respect to the Target.
9. **Latest pictures of the SPV:** Refer annexure 3c for the aforementioned information.
10. **Date of site inspection**: During the month of February/March 2024.
11. **In term of the SEBI InvIT Regulations, we hereby confirm that:**

- We are competent to undertake the valuation.
- We are independent and have prepared this Report on fair and unbiased basis.
- The Valuation has been performed as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issued by the Institute of Chartered Accountants of India.
- KPMG is not affiliated to the Client in any manner whatsoever. Further KPMG does not have a prospective interest in the Target which is the subject of this Valuation and KPMG's fee is not contingent on an action or event resulting from the analysis, opinions or conclusions in the Valuation.

Caveat to disclosures
KPMG has not independently verified the documents related to disclosures mentioned in the annexures and have relied on Management representation for the same.

Source(s): Management information, KPMG analysis

Annexure 3a: One-time sanctions and approvals and overdue periodic clearances

Sr. No	Description	Remarks
a.	Permission of State Government for extraction of boulder from quarries	Not Applicable
b.	Permission of Village Panchayat and Pollution Control Board for installation of crushers	Not Applicable
c.	License for use of explosives	Not Required
d.	Permission of the State Government for drawing water from river / reservoir	The SPV is in process of identifying land for plant set-up and borrow areas. Once identified,Applicable permits and Clearances shall be obtained
e.	License from Inspector of factories or other Competent Authority for setting up Batching Plant	
f.	Clearance of Pollution Control Board for setting up Batching Plant	
g.	Clearance of Village Panchayat & PCB for Asphalt Plant	
h.	Permission of Village Panchayat and State Government for Borrow Earth	
i.	Permission of State Government for cutting of Trees	Not Required
j.	Any other permits or clearances required under Applicable Laws	Not Applicable

Source(s): Management information

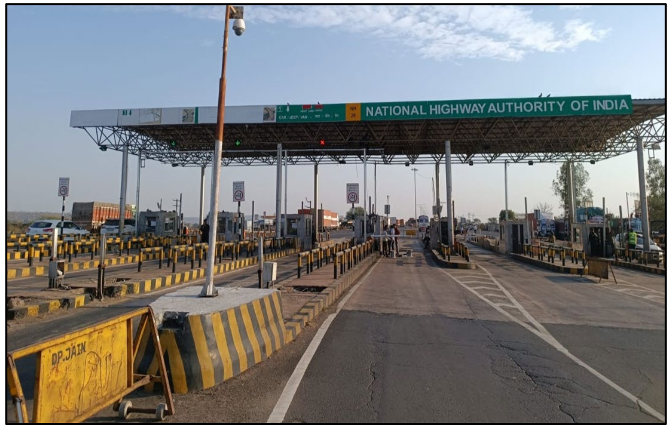
Annexure 3b: Estimates of already carried as well as proposed major repairs and improvements

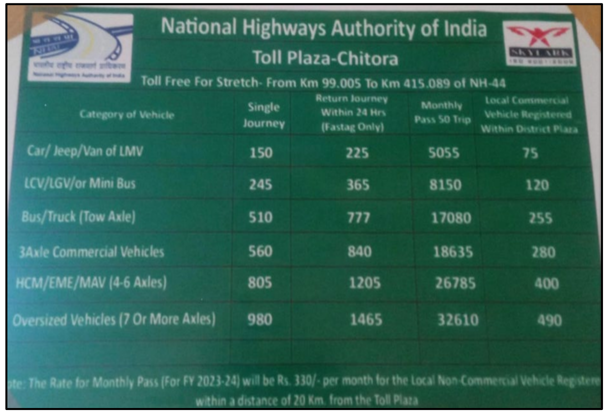
Estimate of already carried out as well as proposed major repairs										
INR Crore										
Name of SPV	**FY2025**	**FY2026**	**FY2027**	**FY2028**	**FY2029**	**FY2030**	**FY2031**	**FY2032**	**FY2033**	**FY2034**
IRB Lalitpur Tollway Pvt. Ltd.	-	-	-	-	66	69	72	75	78	-

Estimate of already carried out as well as proposed major repairs										
INR Crore										
Name of SPV	**FY2035**	**FY2036**	**FY2037**	**FY2038**	**FY 2039**	**FY 2040**	**FY2041**	**FY2042**	**FY 2043**	**FY2044**
IRB Lalitpur Tollway Pvt. Ltd.	-	117	121	124	128	132	-	-	185	185

Source(s): Management information

Annexure 3c: Site pictures





Source(s): Site visits

7.

Scope & Limitations

Scope & Limitations (1/3)

Terms of Engagement

- KPMG Valuation Services LLP ("KPMG" or "we") has been appointed by IRB Infrastructure Trust ("IRBI Trust", "Trust" or "Client" or "you") in relation to carrying out Equity Valuation of IRB Lalitpur Tollway Private Limited ("ILTPL" or "Target") as on the agreed date of the valuation for the proposed rights issue in accordance with Regulation 21 of the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 where valuation is required to be conducted by a registered valuer (as defined under section 247 of the Companies Act, 2013) and such valuation report ("Report") is required to be in compliance with the SEBI InvIT Regulations ("Engagement" or "Valuation").
- The terms of the Engagement are set out in our letter of engagement dated 16 October 2023 along with Addendum to the letter of engagement dated 01 March 2024 (together referred as "LoE").
- The date of Valuation is 31 January 2024 ("Valuation Date").
- This Report sets out KPMG's conclusions on the Valuation and has been prepared in accordance with LoE. Our Report is confidential to the Client and will be used by the Client only for purposes mentioned in the LoE. The Report will be issued by us on the express understanding that it shall not be copied, disclosed or circulated or referred to in correspondence or discussion with any third party. This Report is confidential to the Client and it is given on the express understanding that it is not communicated, in whole or in part, to any third party without KPMG's prior written consent. Neither the Report nor its content may be used for any other purpose without prior written consent of KPMG. This Report has a limited scope as specified in it. KPMG will not accept any responsibilities to any other party to whom the Report may be shown or who may acquire a copy of the Report.
- We are not responsible to any other person/ party for any decision of such person/ party based on this Report. Any person/ party intending to provide finance/ invest in the shares/ businesses of the Target/ their holding companies/ subsidiaries/ group companies, if any, shall do so after seeking their own professional advice and after carrying out their own due diligence procedures to ensure that they are making an informed decision. If any person/ party (other than the Client) chooses to place reliance upon any matters included in the report, they shall do so at their own risk and without recourse to the Valuer. It is hereby notified that usage, reproduction, distribution, circulation, copying or otherwise quoting of this Report or any part thereof, except for the purpose as set out earlier in this report, without our prior written consent, is not permitted, unless there is a statutory or a regulatory requirement to do so.
- We are aware that the Report may have to be shared with certain regulatory authorities in India and stock exchanges in India. We also understand from you that the Report may be included in the offer document for the rights issue and therefore, we understand that the Report may enter public domain and hereby provide our consent to such sharing subject to the following:
  - You shall indemnify and hold us harmless against any loss that may be incurred by us arising out of or relating to sharing of the Report with regulatory authorities in India or stock exchanges in India, or the Report entering the public domain as mentioned herein, as also against all costs, charges and expenses (including legal expenses) suffered or incurred by us on account of the aforesaid. In this clause "us" shall include all Firm Persons and "you" shall include Other Beneficiaries (as these terms have been defined in the LoE).
  - Such Report shall be disclosed in full and strictly in such forms as KPMG has provided to the Client without any deviation.
  - KPMG shall not be liable to any person or party for any reason and under any circumstances.
  - The readers of the Report shall not bring any claim against KPMG for matters arising out of or consequent upon disclosure of the Report.
  - The Report shall be issued with all the disclaimers as provided by KPMG at the time of issuance of the Report.

Scope & Limitations (2/3)

Disclosure of Interest/Conflict

- KPMG is not affiliated to the Client in any manner whatsoever. Further, KPMG does not have a prospective interest in the business which is the subject of this engagement.
- KPMG's fee is not contingent on an action or event resulting from the analyses, opinions or conclusions in this Report.

Basis of Value

- The report has been prepared on the basis of "Fair Value" as at Valuation Date. The generally accepted definition of "Fair Value" is the value as applied between a hypothetical willing vendor and a hypothetical willing prudent buyer in an open market and with access to all relevant information.

Premise of Value

- The report has adopted "Going Concern Value" as the premise of value in the given circumstances. The generally accepted definition of Going concern value is the value of a business enterprise that is expected to continue to operate in the future.
- The valuation has been performed as per internationally accepted valuation methodologies and in cognizance of international valuation standards and ICAI Valuation Standards 2018 issued by the Institute of Chartered Accountants of India.

Scope and Limitations

- This Report is based on the information provided by the Client and has been confirmed by the Client. KPMG have not independently verified or checked the accuracy or timeliness of the same. KPMG have indicated within this Report the sources of the information presented and have satisfied ourselves, so far as possible, that the information presented is consistent with other information which is made available to us in the course of our work in accordance with the terms of this engagement letter. KPMG have not, however, sought to establish the reliability of the sources by reference to other evidence, except as may be specifically agreed in writing between us.
- KPMG has read, analyzed and discussed the financial information and underlying management assumptions pertaining to the Target as provided by the Management of the Client ("Management"). This information has been solely relied upon by KPMG for the Valuation.
- We have based our analysis on the business plan of the Target for the period from 1 February 2024 to the end of the concession periods of the Target as provided by the Management ("Management Business Plan") and key underlying assumptions. Any changes in the assumptions or methodology used to consolidate the financial statements may significantly impact our analysis and therefore the Valuation.
- KPMG has read and analyzed but have not commented on the appropriateness of or independently verified the Management Business Plan and underlying data and assumptions and accordingly provided no opinion on the same. If there were any omissions, inaccuracies or misrepresentations of the information provided by the Management, this may have a material effect on our findings and therefore the Valuation.
- The realization of the projections in the Management Business Plan will be dependent on the continuing validity of assumptions on which it is based. Our analysis therefore will not and cannot be directed to providing any assurance about the achievability of the future plans. Since the projections relate to the future, actual results are likely to be different from the projected results because events and circumstances do not occur as expected and the differences may be material.

Scope & Limitations (3/3)

- This Report makes reference to 'KPMG analysis'. This indicates only that we have (where specified) undertaken certain analytical activities on the underlying data to arrive at the information presented.
- Our work did not constitute an audit of the financial statements and accordingly, we do not express any opinion on the truth and fairness of the financial position as indicated in this Report. Our work did not constitute a validation of the financial statements of the Target, and accordingly, we do not express any opinion on the same.
- We have carried out the Valuation based on Management Business Plan received. Our scope of work does not include any commercial / legal / technical due diligence or carrying out any environmental / technical feasibility analysis or comparison of Management Business Plan with approved budgets / annual operating plans of the Target. We have relied on Management's representation on such considerations and any changes in the same may significantly impact our analysis and therefore the Valuation.
- Wherever applicable, we have relied upon the legal opinion document / affidavit copies provided by Management in relation to the current status of the projects. We have not carried out / sought any independent legal opinion, nor have we verified the accuracy of the legal opinion shared. Any discrepancy in the same may significantly impact our analysis and therefore the Valuation.
- Our opinion is based on prevailing market, economic, and other conditions at the Valuation Date. It should be appreciated that these conditions can change over relatively short periods of time, not only as a result of internal factors, but because of external factors, which could impact the value, either positively or negatively.
- For our analysis, we have relied on published and secondary sources of data, whether or not made available by the Client. We have not independently verified the accuracy or timeliness of the same.
- Neither KPMG nor any of its affiliates worldwide are responsible for updating this Report because of events or transactions occurring subsequent to the date of this Report. Any updates or second opinions in this Report cannot be sought by the Management from external agencies including global offices of KPMG without the prior written permission of KPMG.
- KPMG has not considered any finding made by other external agencies in carrying out the Valuation analysis other than the one mentioned herein.
- For the purpose of the Valuation, our scope does not include valuation or legal due diligence of current assets and liabilities and as represented by the Management, the same has been considered at their respective book value.
- For the purpose of this engagement and Report, we have made no investigation of, and assume no responsibility for the title to, or liabilities against the Target. Our conclusion of value assumes that the title to the assets and liabilities of the Target reflected in the financial statements as on Valuation Date is intact as at the date of this Report.
- Any discrepancies in any table/ annexure between the total and the sums of the amounts listed are due to rounding-off.
- The Report should be read in the light of these limitations, and we caution that had these matters been within the scope of our review, our conclusions may have changed, and that change could be material.
- The information presented in this Report does not reflect the outcome of any due diligence procedures. The reader is cautioned that the outcome of due diligence process could change the information herein and our Valuation, and that change could be material.
- This Report forms an integral whole and cannot be split in parts. The outcome of the Valuation can only lead to proper conclusions if the Report as a whole is taken into account.

Management representation

- This Report is prepared on the basis of the sources of information listed in Annexure 1. KPMG has relied upon written representation by the Management that the information contained in the Report is materially accurate and complete, fair in its manner of portrayal and therefore forms a reliable basis for the Valuation.

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